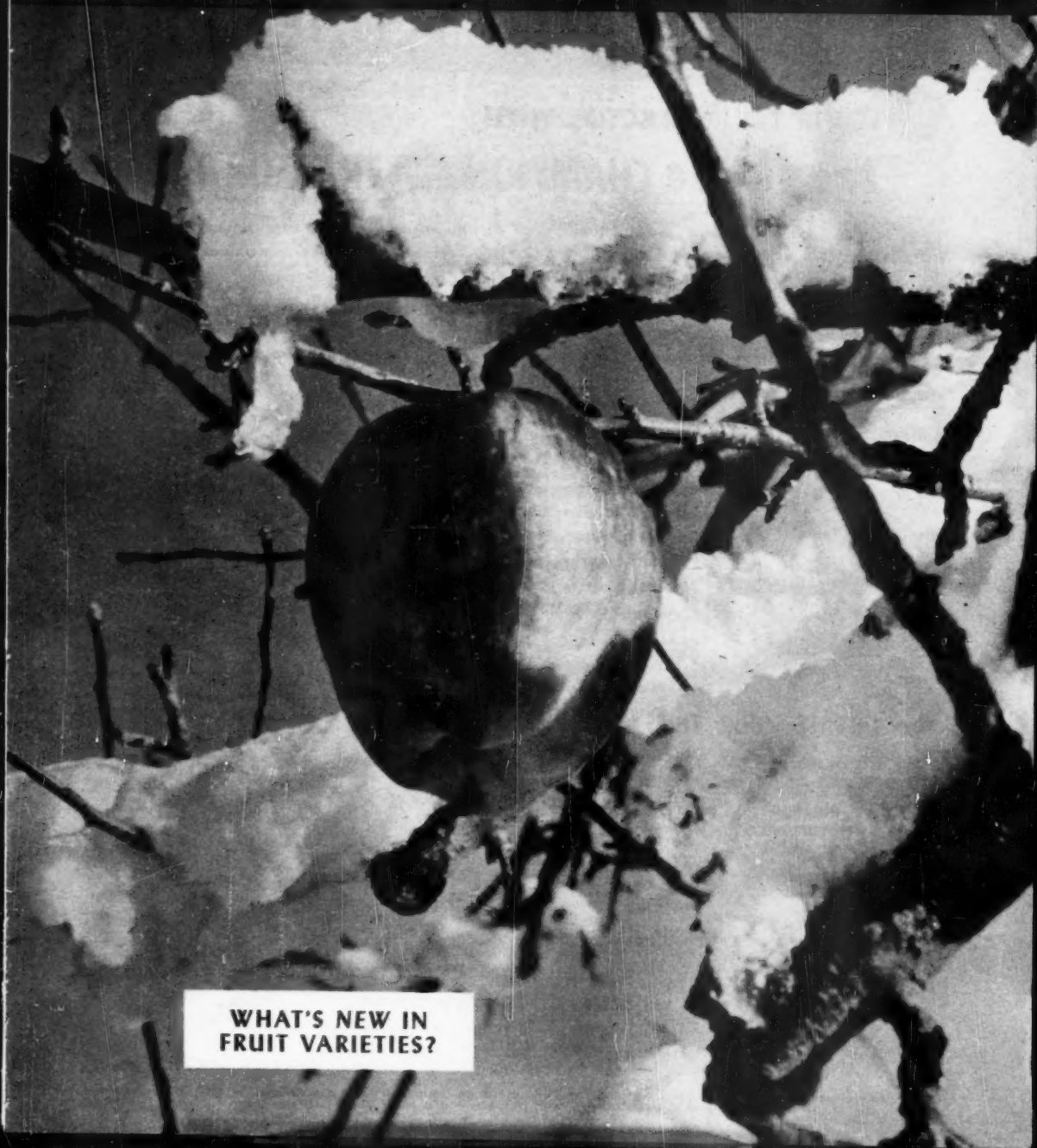


*American*

JANUARY • 1949

# FRUIT GROWER



WHAT'S NEW IN  
FRUIT VARIETIES?

# Firestone OFFERS THREE POSITIVE WAYS TO GET MORE DRAWBAR PULL FROM YOUR TRACTOR

## 1 EQUIP YOUR TRACTOR WITH

### Firestone CHAMPION GROUND GRIP TRACTOR TIRES

For greater drawbar pull, get the tires that deliver the greatest tread bar pull—Firestone Champions. It's no wonder they **OUT**pull all other tractor tires. Just look at the tread bars.

Anyone can see that these bars take a *deeper bite* because they're higher, a *bigger bite* because

they're longer, a *stronger bite* because they're Triple-Braced, and a *sharper bite* because they're especially curved for self-cleaning.

For your present tractor—or for the new one you may plan to order—get Firestone Champions, *the tires that keep pulling for you.*

## 2 HAVE YOUR TIRES HYDRO-FLATED



Firestone Hydro-Flation insures the right liquid-air ratio for maximum traction. You get enough liquid weight to insure maximum drawbar pull, enough air cushion to protect your tires against dangerous body shocks.

## 3 INFLATE YOUR TIRES TO 12 POUNDS



By using only 12 pounds pressure, the whole tread is in full contact with the ground for greater drawbar pull. You can do this safely with Firestone Champion Ground Grip Tractor Tires because the sidewalls are reinforced for low-pressure operation.



**THE FIRESTONE TIRE & RUBBER COMPANY**  
AKRON, OHIO • MEMPHIS, TENNESSEE • LOS ANGELES, CALIFORNIA

## An Improved Dormant Spray!

DN-289, Dow's superior liquid, *non-oil* preparation controls aphids, bud moth, scale insects, red mite, cherry case bearer, and pear psylla—*without oil*.

This superior dinitro preparation for dormant spraying has been thoroughly tested in the Dow experimental program since 1942. As a single treatment, DN-289 proved to be the most effective material yet available for the control of external parasites on apple trees during the dormant period. It is also recommended for use on pears, cherries, plums and prunes.

**CLEAN  
FRUIT  
SELLS!** DN-289 is a stable, brown, nonfreezing solution which mixes readily with water. It must *not* be used with oil. Before using, consult the label on the container for complete directions and precautions. Consult your county agent, state experiment station or qualified supplier.

### New DN-289

Also Dowspray Dormant-*DN* Dry Mix No. 2

AGRICULTURAL CHEMICAL DIVISION

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN



DOW

CHEMICALS INDISPENSABLE  
TO INDUSTRY AND AGRICULTURE



### PREDICTION 1

The biggest postwar gain of cost rates (farm) over prices received is expected this year — (U.S.D.A.).

### PREDICTION 2

Many fruit growers will reduce costs using an Allis-Chalmers rear-engine Model G.

#### FULL LINE OF COMPANION TOOLS

- 5-Foot Mower
- 5-Foot Disc Harrow
- Spring Tooth and Drag Harrows
- 2-Row Drill Planter
- Attached Moldboard Plow, 12-Inch Bottom
- Multiple-Row Ground- and Power-Driven Seeders
- Independent-Gang Cultivator for Bed Cultivation
- Multiple-Row Independent-Gang Cultivator
- 80-Inch Single Tool-Bar Cultivator
- 60-Inch Double Tool-Bar Cultivator

Using only two to three quarts of fuel per hour, the new economical Allis-Chalmers Model G tractor cuts both operating and overhead costs.

The Model G with its full line of companion implements and pulley power is *handy* power. Use it for tilling orchard or grove . . . hauling fruit . . . powering the fruit grader . . . mowing . . . raking . . . hauling feed to poultry or other livestock . . . cultivating berries and vegetables. It can also cut costs by supplementing larger tractors.

Its low height is ideal for working under trees. Engine in rear permits unrestricted view of work being done. Speeds vary from  $\frac{3}{4}$  up to 7 m.p.h.

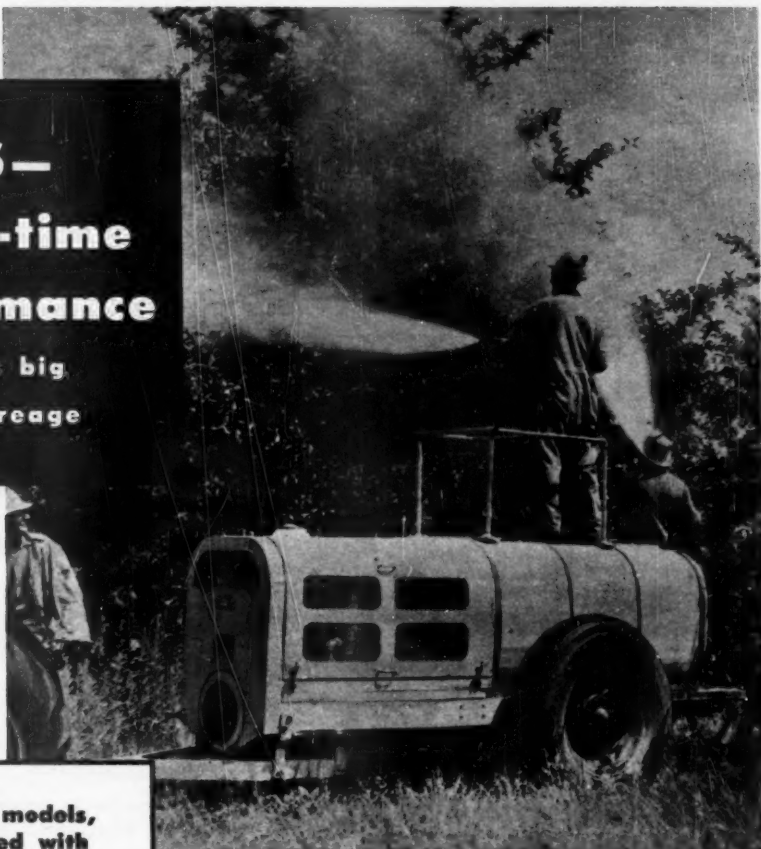
It's a safe prediction: Many fruit growers will cut the high costs of 1949 with the new economical Allis-Chalmers rear-engine Model G.

**ALLIS-CHALMERS**  
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.



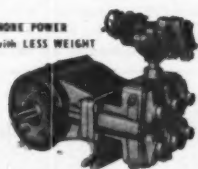
# MYERS— for big-time performance

whether it's big  
or small acreage



## Dozens of models, all equipped with famous Myers Bulldozer Pumps

**MORE POWER  
with LESS WEIGHT**



Full range of 2 and 4-wheel sprayers



Full range of this type models

When a Myers '49 Sprayer goes into action, it's big-time performance for fast, complete coverage at lowest cost. More pumping power with less weight is packed into famous Myers Bulldozer Pumps. They're strong and rugged, precision machined, smooth in operation. Built in four models with capacities from 7 to 50 gallons per minute and pressures from 350 to 800 pounds.

Name the capacity and pressure you want and you can get it in a Myers Sprayer, wheel or skid type, power take-off or engine driven, with a chassis, pump and tank best suited to your requirements. For big acreage or small, you can have the big-time performance of a reliable Myers Sprayer that will save you money, season after season. Mail coupon for dealer's name and catalogs.



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# "Rain-proof" YOUR FRUIT TREES with Good-rite p.e.p.s.

## THE NEW FUNGICIDAL ADHESIVE THAT SHEDS RAIN . . . keeps pesticides on

**B**BETTER protection for your orchards is easier now. Just add Good-rite p.e.p.s. to your sprays. It's the new fungicidal "sticker" that keeps sprays from washing off trees, even in heavy rains.

Good-rite p.e.p.s. gives better and longer-lasting coverage. In many cases, it makes reduced dosages possible—extra savings for you in work and money.

This new agricultural chemical is basically polyethylene polysulfide. It is processed in a new way which permits the preparation of a non-injurious and remarkably stable product. It has been *proved* in four seasons' tests.

### MORE FRUIT—LESS WORK

Good-rite p.e.p.s. helps give you more saleable fruit because of better disease and insect control. It is *highly adhesive* . . . resists heavy rains that wash off ordinary sprays. It is widely compatible with practically all fungicides and insecticides . . . increases their effectiveness. *Non-injurious* to fruit and leaves. *Resistant* to freezing.

Good-rite p.e.p.s. is another B. F. Goodrich Chemical Company development that opens new ways to get better results—at lower cost. Write Dept. AF-1 today for complete information.

**DISTRIBUTORS—DEALERS!**—Good-rite p.e.p.s. can be an extra money-making addition to your line. It's going over big. Send for full information. Write Dept. AF-1.



**NEW . . . EASY-TO-USE "BRICK"**  
Take heavy-foil-wrapped cartridges in a 4-lb. package. Simply unwrap, crumble, dump on screen and wash in with water. Each cartridge makes 400 gallons.

**B. F. Goodrich Chemical Company**

Good-rite p.e.p.s. is a B.F. Goodrich Chemical Company product.

Good-rite p.e.p.s. is a B.F. Goodrich Chemical Company product.

# Finer Fruit Every Time

WHEN YOU CONTROL SCAB WITH



"Fermate" provides more than scab control for your apple and pear crop . . . it usually leads to a bigger crop as well as a cleaner crop. And the trees protected with "Fermate" are more vigorous. Here are its outstanding features:

- **Effective scab control** used as dust or spray.
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- **Safety from burning**, even in hot weather.
- **No russetting**, even with the tenderest varieties of pears or apples.
- **Higher yields** from more vigorous trees.
- **Better tree condition** . . . better bud formation for the next crop.

**Controls other diseases:** On apples and pears, the applications of "Fermate" for scab also control rust, bitter rot, black rot, leaf blight and apple blotch. "Fermate" is also outstanding for brown rot of stone fruits, for raspberry anthracnose, cranberry fruit rot and grape black rot.

► **SEE YOUR DEALER** for supplies now. Ask him for free Du Pont booklets, or write direct to Du Pont, Grasselli Chemicals Dept., Wilmington 98, Delaware.

#### DU PONT CHEMICALS FOR THE FARM INCLUDE:

PARZATE\*, FERMATE\* and ZERLATE\* Fungicides; Copper-A, Fixed Copper; DEBNATE\* DDT and MARLATE\* Insecticides; AMMATE\* and 2,4-D Weed Killers; LEXONE\* (Benzene hexachloride); KEENITE\* Dinitro Spray; LORO\* and SULFORON\* Wettable Sulfurs; Du Pont Spreader-Sticker; Spray Adhesive; PARMONE\* Fruit Drop Inhibitor, and many others.

\*REG. U. S. PAT. OFF.

#### Du Pont Also Provides:

**"DEBNATE" DDT**—Exceptional for control of codling moth and many other insect pests of fruit crops—Du Pont's proved formulation.

**"MARLATE"** Insecticide—New, effective, unusually low toxicity. Ideal for pre-harvest sprays. Especially for cherry fruit fly and fruit worm, cranberry insects, many insect pests of peaches, other stone fruits, berries and grapes.

**"ZERLATE"** Organic fungicide—Excellent for brown rot of stone fruits. Light-colored, does not show, yet protects fruit through harvest and shipping.



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BETTER THINGS FOR BETTER LIVING  
... THROUGH CHEMISTRY

# The New TRAVERSE BOOM!

— FULLY AUTOMATIC —

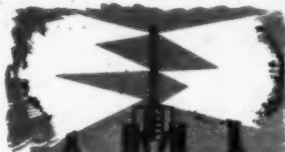
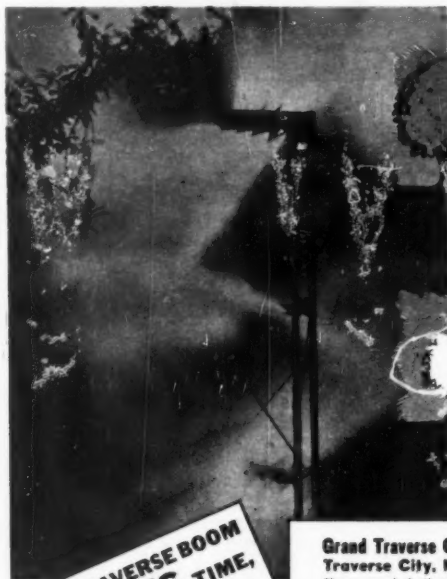
● Let the new Traverse Boom do the work. Designed, manufactured and orchard tested by a group of successful Michigan growers. The Traverse Boom has proven its leadership in the field of automatic sprayers and is greatly improved for 1949.

A new nozzle design gives better spray penetration. A new valve mounted on the boom but operated from the tractor seat gives the driver instant and positive control over each spray tube. The new Traverse Boom can be used on any high pressure spraying rig and comes in two new models. Model 20 for medium sized trees has four horizontal spray tubes each with five nozzles. The model 30 for large trees has six horizontal spray tubes each with five nozzles.

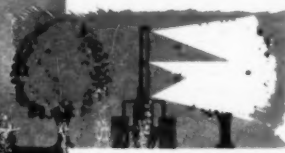
- Two New Models—20-30
- New Nozzle Design
- Finger-tip Control

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GRAND TRAVERSE ORCHARD SUPPLY CO., Inc.  
TRAVERSE CITY, MICHIGAN



**SPRAYING TALL TREES** Model 30 Traverse Boom for short or tall trees. Operator can instantly turn on or off any of its six spray tubes from the driver's seat.



**SPRAYING ONE SIDE** Where trees are spaced far apart, or on the outside rows, use only the spray tubes needed for the job.



**TALL AND SHORT TREES** You can automatically use the lower spray tube only, on one side, and two or more on the other side as the need occurs.

**A TRAVERSE BOOM  
SAVES TIME,  
LABOR, FRUIT,  
SPRAY MATERIAL**

**Grand Traverse Orchard Supply Co., Inc.  
Traverse City, Mich.**

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Street or \_\_\_\_\_  
R.D. Number \_\_\_\_\_

Town or County \_\_\_\_\_ State \_\_\_\_\_  
Please print.

JANUARY 1949  
VOL. 69 No. 1

## CONTENTS

### THIS MONTH'S COVER

The picture of a Delicious apple appearing on this month's cover was taken at Lakeside in the State of Washington during the month of January when snow was heavy on the trees. Nature is not always constant but has her quirks too.

Letters to the Editor	13
Are We Maintaining Our Orchard Plantings?	15
By C. W. Ellenwood	
What's New In Fruit Varieties	16
By U. P. Hedrick	
Promising Apple and Pear Varieties	17
New Hardy Fruits	18
By W. R. Leslie	
Citrus Variety Situation	19
By W. H. Friend	
Recent Peach Introductions	20
By John H. Weinberger	
Likely Grape Varieties	21
Small Fruits of Promise	22
By G. L. State	
Soft Tree Fruits for Pacific Coast	23
New Varieties of Merit	24
Nationwide Fruits	25
Citrus, Grapes, Berries, Apples, Peaches	
State News	26
Marketing	28
Are You Planting Good Nursery Stock?	30
By H. B. Toxey	
American Pomological Society	
The Alberta Peach	34
In the News	38
Calendar of Coming Meetings and Exhibits	57
Ramblings	60
Editorial Page	62

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AMERICAN FRUIT GROWER



# WATCH THIS DIAMOND



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● Lead arsenate, calcium arsenate, DDT, Chlordane, Benzene Hexachloride, Parathion, Dormant oil, Dinitrol, Zinc sulfate, nicotine, merthon-miticide, Flo-Sul paste sulfur, wettable sulfurs, blended dusts, Carbamates, Toxaphene, lime sulfur, essential minerals, 2,4-D weed-killers, sticker-spreaders.

*One of the Nation's largest manufacturers  
engaged exclusively in the production of  
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This year you can get better color, better finish and cleaner fruit by following the recommendations on the FARMRITE SPRAY CHART prepared for your locality. Farmrite Orchard Chemicals are carefully compounded for the best control of insects, diseases and easy, safe application. Write today for your free spray chart.



# 3 of America's most useful farm Vehicles

We had farm and ranch needs in mind when we designed these Willys-Overland vehicles. We made them useful... practical... economical to operate and maintain. We gave them high clearance... short turning radius... sensible fenders... good road vision. See them today, at the Willys-Overland dealer near you.



## Jeep Station Wagon

We believe the 'Jeep' Station Wagon is the most useful car ever made for a rural family. It is a smooth-riding, good-looking passenger car with ample room for 6 adults in its all-steel body, together with large parcel space. It is practical for hauling jobs, too, for seats can be removed to provide 98 cubic feet of load space. Seats and floor are washable. It's easy handling, level-riding on country roads—and, with the 'Jeep' Engine and overdrive, a money-saver on gas. See this dual-purpose car now.

## Jeep Trucks

Willys-Overland builds two lines of pick-up and platform-stake trucks that give long, dependable service and low costs:

The 2-wheel-drive 'Jeep' Truck (4700-5300 lbs. GVW) is designed to keep operating and upkeep expense at rock-bottom for service under normal conditions.

The 4-wheel-drive 'Jeep' Truck (5300 lbs. GVW) is a rugged tonner with the extra traction you need for off-road hauling, for tough grades, for getting through snow, sand and mud.



## UNIVERSAL 'Jeep'

The 4-wheel-drive Universal 'Jeep' is a modern tractor that operates both pull-type and hydraulic-lift implements—plows, harrows, discs, weed sprayers, power mowers, etc. But, with a speed range from 2 mph in the field to highway speeds, the 'Jeep' also serves the year 'round as a general-purpose vehicle for hauling, towing and cross-country travel. Your Willys-Overland dealer will gladly demonstrate this handiest of farm vehicles.



**YOUR SCRAP IRON** is needed to make steel for implements, vehicles and other things you need. Sell it to a scrap dealer now.

**WILLYS-OVERLAND MOTORS, TOLEDO • MAKERS OF AMERICA'S MOST USEFUL VEHICLES**

# Low-Boy BLITZES a Bug-A-Boo

by  
**JOHN BEAN**

GIVE a fruit grower a good idea and he'll come back with a better one. That's one thing we've learned while doing business with fruit growers for some sixty-six years and we learned it all over again in Frank Walters' cherry orchard last summer. That isn't his real name, of course, but he does own as pretty a block of sour cherries as you'd wish to lay your eyes on.

We were looking for an orchard to take some action pictures of our new Low-Boy automatic sprayer — an orchard with big, uniform trees and dense foliage. The local John Bean dealer made just one phone call and came out of his office smiling.



"Frank Walters is spraying his cherries and we can take the Low-Boy out there to get the pictures," he reported. Then, as a sedative, he added: "Frank doesn't think much of these new-fangled spray masts. So don't be disappointed if he doesn't get all excited about your Low-Boy."

Those big, even trees in the Walters' orchard were made to order for demonstrating the features of the Low-Boy and while we were busy taking pictures of the spray rolling over the topmost branches and driving through the thick centers, we almost forgot about Frank and his dislike for automatic spraying attachments. Then, a husky, two-fisted chap in faded denims strolled up and we met Frank Walters and took a first-hand liking to the man. Even when he scowled as he studied the Low-Boy.

"Did you get a chance to see it work while we were taking the pictures?" the John Bean dealer asked.

"Yea-a," Frank replied, "but I'd like to see it work some more. Mind if I drive it around the orchard a bit?"

**JANUARY, 1949**



He was back after a while and his three-man spray crew was riding along — glad for a break in their day's labor. However, their pleasure



quickly turned to dismay when Frank stopped the tractor and turned to them.

"George," he said and singled out one of the spray-spattered crew. "You see that right-hand set of four spray guns on the Low-Boy? From now on, that's you."

Bewilderment swept over George's face as Frank turned to a second member of the spray crew. "Harry, that left-hand set of spray guns on the Low-Boy is you. And Dick," the tractor driver looked up, "I want you to know that if you and both of the others don't show up for work any morning during spraying season, I'm going to be on that tractor seat and the spraying is going to get done — on time."

Frank let that soak in and you could have cut the silence with a knife. Even the Low-Boy looked a bit guilty standing there before the three men whose jobs seemed to be threat-



ened. Then Frank's set face relaxed into a broad grin.

"I know what you men are thinking," he said, "but don't worry — you're not going to lose your jobs. There's plenty for all of us to do around here — things that we've never had time for because of spraying. Now, we're going to do those jobs, and the spraying is going to get done on time, too."

For a man with an order for a new spray outfit in his pocket, the John Bean dealer was unusually quiet on the drive into town. It wasn't until we pulled up in front of his sales room that he confessed.



"It sort of takes me down a peg to admit that the Low-Boy is a better salesman than I am. If automatic spraying can help Frank Walters get rid of his spraying bug-a-boo, it is going to do the same for a lot of other fruit growers I know."

**John fmc Bean**  
Lansing 4 Michigan San Jose California

**DIVISION OF FOOD  
MACHINERY & CHEMICAL CORP.**

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for more cash  
for YOU...use**



**SHERWIN-WILLIAMS**  
SUPERIOR FORMULATION  
**Insecticides...Fungicides...Adjuvants**

**The RIGHT Chemical  
for EVERY Grower's  
EVERY need**

**Y**OU'LL GET MORE CASH from bigger, better, *pest-free* crops. Fruit-destroying insects—fungus—pests of every kind—vanish before these thoroughly reliable, potent preparations.

Just see how complete the Sherwin-Williams line of fine products is. You're sure to find the right product for *your* crop.

And realize that back of every product stands Sherwin-Williams research, resources and reliability. Sherwin-Williams—the name that protects the products that protect your crops.

Your S-W Dealer can supply you with information on specific products for specific crops and pests. Or write The Sherwin-Williams Company, Agricultural Chemicals Division, 1287-I Midland Building, Cleveland, Ohio. (Export Division, Newark, New Jersey.)

**In Canada ask for Green Cross Insecticides and Fungicides**

**SHERWIN-WILLIAMS**  
**AGRICULTURAL CHEMICALS**  
*Protecting the Food Crops of America*





# LETTERS TO THE EDITOR

## Beware Bulk Sales to Truckers Only!

Dear Editor:

A healthy apple industry needs growers producing apples that are a good value and competitive no matter what manner is used to get the fruit to the consumer. Such a grower no doubt will use all methods of marketing his apples—boxes and baskets to processors and in bulk to trucks. The tragedy being enacted in many fruit growing counties is that growers are getting in a downhill groove of producing apples for bulk sales to trucks only. When this outlet dries up, they are stuck, since their fruit is not good enough to be packed and stored.

A grower producing for trucks only stated that four sprays were all that he could afford to. Growers producing good apples applied eight to 15 sprays! In general, growers producing for truck only are growing a quality of fruit that will hang like a millstone around the neck of the industry, demoralizing markets and prices in years of heavy production.

Fundamentally, it is wrong to produce poor fruit. The consumer becomes dissatisfied with poor apples regardless of price and will use other fruit. A satisfied consumer can use a lot of apples, and to have 140 million happy apple consumers should be the aim of the apple industry.

It is not a problem of whether the apples get to the consumer by truck or by rail, but it is a problem of getting high quality apples to the consumer. If this is done, each purchase will stimulate another purchase, insuring a continuous demand and continuous activity in the market throughout the season. Chilhowie, Va. J. B. Bonham

## Virus Transmitted by Pruning Tools?

Dear Editor:

I, and no doubt many other peach growers, want to know if the virus diseases can be carried from one peach tree to another on pruning tools.

The peaches on some of my five-year-old trees this past season were small; however, these trees were so loaded with fruit that I had to prop the limbs and this may have accounted for the small peaches. But I don't want to take any chances with this virus disease.

Fremont, Ind.

Bert Caswell

Your explanation of small-sized fruit on overloaded trees is probably right. As far as the transmission of peach viruses is concerned, they are seemingly spread by insects, which are called "vectors." Leafhoppers are especially active as vectors. Usually, viruses are most active where insects thrive. Viruses can also be spread by grafting. Certain ones can be spread in other ways. But as far as the peach is concerned, pruning tools do not spread the viruses.—Ed.

## Hillside Planting

Dear Sir:

I have a small farm in the southwestern part of Missouri—in the Ozarks. West of my 72 acres is valley and some of it is hills. It seems that every year the peach and cherry trees freeze before the fruit has an opportunity to form; consequently, I have never had a crop, and they are not young trees.

Is it true that the frost hits the valley first and that the hillside is better for fruit plantings?

Also, what do you know about earthworm culture and placing a shovelful of earthworms at the base of each tree for

fertilizing and cultivating the earth? Chicago, Ill.

Mrs. R. C. Wessel

The location of your orchard is probably the most important consideration affecting your success as a fruit grower. High land is a protection against frost, and orchards on desirable hilly locations often have crops where lowland orchards are frosted out. For information on the best part of your farm to put in fruit, we suggest that you get in touch with the Missouri Agricultural Experiment Station at Columbia, the Mountain Grove Horticultural Experiment Station, Mountain Grove, Mo., or the county agent in the county in which your orchard is located. They are familiar with your territory and can offer you some very sound advice.

Earthworm culture has received a little publicity lately, but I know of no scientific work in this country which would prove or disprove this new theory. If I were you, I would fertilize with regular orchard fertilizers and leave the experimenting with earthworms to others.—Ed.

## More on Second Blooming of Fruit Trees

Dear Sir:

In your November issue you have a letter which makes inquiries concerning a second blooming by pear trees, and this is followed by some explanatory discussion by the Editor.

This question and discussion were of more than usual interest to me because of the experience we have had during the past season. The spring and summer were unusually favorable for the development of plant diseases which thrive under moist conditions. Unsprayed apple trees were generally defoliated by scab by mid-August; and some leaf disease caused the pears to lose their foliage unusually early. Many of these trees began to put out a second crop of leaves, and they also bloomed freely. Even very old trees did so.

I know nothing of the physiological processes that result in a second blooming, but it is not difficult to see what external conditions brought about the almost universal second crop of pear blossoms in this area last season. Even some apple trees bloomed in September. I have observed the same response in a pear tree which had been defoliated by the Japanese beetle in July.

The same conditions that produced early defoliation of pear and apple trees also caused early defoliation of other trees, some of which put out new leaves. New leaf growth, following complete or partial defoliation, was observed in black walnut, balm-of-Gilead, pussy willow, linden, and other species.

Staunton, Virginia. A. M. Woodside

## Uneven Ripening of Grapes

Dear Sir:

Can you tell me what causes grapes to ripen unevenly? This past season was the second year my grapes bore and both times some of the grapes were ripe, some pink, and some green.

New Bremen, Ohio Frank Sunderman

Uneven ripening of grapes is usually associated with a slow growing season or a short growing season. Varieties which ripen late are liable to this trouble. Partly for this reason, the trend is towards the varieties which ripen earlier, such as Portland, Ontario, Van Buren, and Fredonia. The late-ripening kinds, such as Vergennes, Catawba, and Goethe are disappearing except in favorable locations for ripening.—Ed.



# CRAG

Trade-Mark

## Fruit Fungicides (341B and 341C)

Protect your profits against  
apple scab  
cherry leaf spot

The CRAG Fruit Fungicides are efficient protective fungicides. 341C gives outstanding control of apple scab and 341B is equally effective against cherry leaf spot.

8 advantages  
that bring you profits.

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APPLICATION**



**FOR CAREFUL  
CLOSE-UP  
HAND WORK**

## NEW **IRON AGE** SPRAY HEAD Gives You 2-Sprayers-in-1

**P**ROFIT-MINDED orchard and grove operators know now more than ever why it pays to spray the Iron Age way.

For the amazing new Farquhar Iron Age automatic - oscillating Spray Head attachment makes all Iron Age Sprayers *universal* . . . actually gives the grower two-sprayers-in-one.

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# ARE WE MAINTAINING OUR ORCHARD PLANTINGS?

**Many of the Nation's Fruit Trees Have Passed Most Efficient and Productive Levels**

By C. W. Ellenwood, Ohio Agricultural Experiment Station

**I**N ANY long-range evaluation of the fruit industry, primary consideration must be given to the number of young trees coming along. Because orchards grow old and lose their vigor, it is essential that strong new trees be planted to revitalize and maintain the orchard business. However, it seems apparent that many orchard plantings are drifting into old age with no provision made for their renewal.

What can be done to avoid such a situation? First of all, the point at which a tree becomes overage should be carefully considered. I believe that the quality of apples begins to deteriorate in most areas after 30 years and certainly by the 35th year. At this age the cost per bushel for spraying, picking, pruning, and most other fruit growing operations goes up. During the four-year period 1934-1937 the cost per bushel for spraying 20- to 23-year-old trees in Ohio was nine cents, as compared with 13 cents on 42- to 45-year-old trees. The same men and machines sprayed both lots of trees and the yield of fruit on all trees was uniformly good.

The fastest picking is accomplished on well-laden trees about 15 years of age. However, the rate per bushel per man hour does not diminish very much until after the trees are about 25 years old. By the time the trees reach 40 years, the rate of

picking even on heavily laden trees is not more than two-thirds as fast as at ages 15 to 25 years. So much for the cost of operation. Color, size of fruit, and the all-around quality are equally difficult to maintain on older trees.

What is the situation today? A recent survey taken among members of the Ohio State Horticultural Society showed that 46 per cent of the apple trees ranged from 10 to 25 years of age, 36 per cent were more than 25 years old, and 18 per cent were less than 10. Probably it would be more revealing to have a more detailed breakdown of these data, but the figures do show that more than one-third of the trees are at or near the point of overage and there are not sufficient trees coming along to take their place.

Reports from many other fruit producing sections show similar trends, with some exceptions. Confirming these are recent reports at State fruit grower meetings which show that one of the most dominant themes is the need for better quality. There is a definite correlation between age of tree and quality of apples. I am using the term "age" here as a measure because it is more definite than size or vigor of tree. It is easier to determine the tree's age and to write understandingly about it than to use other indexes of vigor. For that matter, a tree may be in

good vigor and even increasing its yearly production and still be of doubtful value due to age.

Probably the primary reason why there is a need for more young trees is that too often a prospective orchardist has planted his entire orchard at one time. This may work all right until the trees are 25 or 30 years old, but at this point the lack of young trees poses difficult questions. The trouble is that the grower has the bear by the tail. He feels he cannot "let go" these old trees. By so doing his total production would drop below the required amount to justify his overhead. If in the beginning the grower had planted, say, half his site and then after a five-year interval planted the rest, that trouble would have been avoided.

Scarcity of labor combined with high costs has also slowed down planting and has affected the removal of old trees. Profitable selling prices have made it easy to keep those old trees just one more year. Also, some areas have had more than their share of frost damage in recent years which makes it difficult to take a long range viewpoint. Difficult though it may be, that is the requirement to success in orcharding. Finally, we are growing more bushels per tree than we did a few years ago due to better cultural treatments. These are some of the factors which have

(Continued on page 44)



By U. P. HEDRICK

**W**HAT is a variety as fruit growers use the term? Downing and Darwin have set examples that all fruit growers should follow. As they use the word, a variety is: A group of individuals whose characters are too trivial to entitle them to rank as a species. Several other distinctions pertain to varieties that are not usual in species, as follows:

Crosses between varieties can almost always be made to obtain orchard varieties. Thus, Cortland is a cross between McIntosh and Ben Davis apples; Veteran is a cross between Early Elberta and Vaughan peaches. To be sure, there are many orchard fruits that are crosses between species. Purple raspberries are hybrids between red and black raspberries; blackberries and dewberries readily hybridize, as do most species of grapes; and Duke cherries are hybrids between the sweet and sour species of this fruit; species of American plums readily hybridize.

Again, sports (mutations of naturalists) are very common in varieties, not so common in species. There are many red sports of apples; white currants are sports from red varieties; thornless blackberries are mutations; clingstone peaches often sport into freestones and the reverse; and yellow pears often have russet skins.

On the other hand, permanency is a strong tendency in orchard varieties. The Shropshire Damson goes back to Christ's time; the Red-cheek Melocoton was for centuries the commonest peach in Europe; the Red Dutch currant is at least 300 years old. Varieties of newly domesticated fruits are less permanent than those that have been long grown. Those of most tree fruits are very permanent, while American grapes, blackberries, raspberries, strawberries, and blueberries, all newly domesticated, may be readily improved.

A distinctive character of all orchard varieties is that in the nursery all are propagated by plant division. That

is, they are multiplied by buds, grafts, cuttings, stolons, and root divisions; seldom, if ever, are they grown from seeds.

The fruit growers' oft-stated assertion that there are too many varieties is a half truth. There are too many varieties of fruits, but there are far too few good varieties. Every variety of any fruit can be characterized better by its faults than by its merits. No variety of any domesticated plant is perfect. Without new varieties horticulture in all of its fields would be at a standstill. Hence, there is now, ever has been, and ever will be a shifting of varieties in the lists of fruits.

A hundred years ago, Early Harvest, Red Astrachan, Twenty Ounce, and Roxbury Russet ranked ahead of Baldwin in popularity; McIntosh, Cortland, and Delicious, present favorites, were not known. Bartlett was far down in the list of pears. A century ago the Montmorency cherry was less grown than Early Richmond, and Black Tartarian was the most popular sweet cherry. Not a peach nor a plum then popular is now planted. The Concord grape was little grown and no variety of small fruit we have now was then known.

The world moves; nothing is permanent; an assortment of fruits pleases the palate and the eye; new uses for new fruits constantly arise; there is a divine spark of discovery and invention in man which shows forth in plant breeding, and collections of fruits appeal to those who desire good things. So, despite a critical attitude toward new varieties, usually summarized in the curt dictum "they don't pay," we have new fruits. There always have been and there always will be new fruits. The procession is endless. There is a limbo for discarded varieties into which millions of fruits have been cast in the past and in the process of evolution millions more will follow the discards of by-gone ages. The apple in the last garden to be tended by human hands will be vastly different from the apple that grew in the Garden of Eden.

By the way, what if Adam and Eve had "standardized" the apple of Eden and it had come down to us as they first saw it? What a loss to the world there would have been in the quintessence of flavors and aromas and the diversified colors of the splendid assortment of the fruit of fruits that we now grow!



# Promising Apple & Pear Varieties

## FOR THE EAST . . .

By WESLEY P. JUDKINS, *Ohio Experiment Station*

**W**HAT varieties of apples do you expect to plant next spring? Are you loyal to the proven favorites like McIntosh, Rome, and Jonathan? Have you seen the new Melrose which has been so satisfactory in test plantings in many States? Possibly you expect to increase your volume of early types and are interested in Early McIntosh, Melba, Lodi, or Transparent.

If the whole field is surveyed, dozens, yes hundreds, of varieties must pass slowly over the judging table and be appraised. This task is a pleasant pastime for the grower, but is also deadly serious. Upon the final choice rests the profits or losses from many future crops of fruit.

Until the newer varieties have been well tested, the bulk of all commercial plantings should consist of types which are known to be profitable in the region where the fruit grower is located. This means that such varieties as Delicious, Golden Delicious, Jonathan, McIntosh, Rome, and Stayman should form a large proportion of most plantings.

During recent years there has been a tendency toward reducing the number of varieties which are planted. This development is appreciated by produce dealers, nurseries, and the consuming public. As a result, only a limited number of the more promising varieties need be considered by most growers.

The various recent introductions should be considered for special uses and roadside trade. By planting a few of the most promising new varieties, the grower will become familiar with their possibilities under his particular conditions.

One of the most promising new fall and winter apples is the Melrose. This apple is a cross of Jonathan and Delicious. The late-harvesting and late-keeping character—  
(Continued on page 31)

## THE NORTHWEST . . .

By LEIF VERNER, *University of Idaho*

**I**N THE Pacific Northwest the commercial apple industry traditionally is based on a small number of varieties. These are well known in our markets and enjoy a good demand. Growers know how to handle them and what to expect of them in return. New varieties are regarded with extreme conservatism and at present no new variety is making any serious headway in commercial plantings.

The major trend in apple plantings in this area in recent years has been toward the red sports of established varieties, with the Starking sport of Delicious in the lead. Red sports of Jonathan, such as Blackjon and Jonared, are favored where Jonathan types are being planted, but are not replacing the parent variety to the extent that Starking is replacing Delicious. Red sports of Rome Beauty also are favored, especially in Idaho. There is also  
(Continued on page 54)

## BRITISH COLUMBIA . . .

By A. J. MANN and F. W. L. KEAN

*Dominion Experimental Station, Summerland, B. C.*

**T**HE TWO new apple varieties described in this article and the three stone fruits described elsewhere in this issue, all of which show promise and are being planted for extended commercial trial, have resulted from a tree-fruit breeding project begun at the Summerland Experiment Station in 1926.

The Jubilee apple is a cross of McIntosh and Grimes Golden. The tree is vigorous and moderately spreading, with a desirable habit of growth. It has been a fairly consistent though not a heavy bearer and the fruit requires moderate thinning. It picks easily but is quite resistant to pre-harvest drop. The fruit is of medium size and in appearance resembles Jonathan more nearly than it does other standard varieties. Its color, however, is a bright red and lacks the striped effect of Jonathan. The flesh is firm, crisp, cream-colored, and juicy. The quality is good, fully equal to Jonathan. The skin is fairly  
(Continued on page 56)



Melrose

Starking



Jubilee

JANUARY, 1949

Jubilee



Bartlett



# New Hardy Fruits

By W. R. LESLIE

Dominion Experimental Station, Morden, Manitoba

**O**RCHARD and small fruits are being planted extensively across the Great Plains. Productive home orchards extend as far into the Northwest as the Peace River Valley several hundred miles northwest of Edmonton in northern Alberta. The list of approved varieties for the various climatic zones continues to change considerably as new varieties win recognition on the basis of their behavior in test plantations. While a number of new fruits are the result of efforts on the part of private growers, the large proportion comes from such fruit-breeding institutions as the Minnesota Fruit Breeding Farm; South Dakota State College; Great Plains Field Station, Mandan, N. D.; Central Experimental Farm, Ottawa, Ontario; and Experimental Station, Morden, Manitoba. Some varieties developed at Geneva, N. Y., Durham, N. H., and other stations in relatively mild climates are proving valuable deep into the prairies. Some of the varieties now esteemed by growers and consumers are worthy of mention.

Mantet and Melba are top-rank early apples. Mantet is a seedling of Tetofsky selected at Morden. The tree is hardy and productive. The fruit, of medium size, is attractive bright red, flesh whitish, fine, tender, juicy, and aromatic. It is an excellent eating apple ripening from August to September. Melba is an early seedling of McIntosh from Ottawa. The tree is much harder than the parent and has borne well in Calgary, Alberta. The carmine and crimson colored fruit is of medium size. Flesh is white, crisp, tender, sprightly, and perfumed. It is an excellent dessert apple ripening from August to early October.

Heyer No. 12 was developed from Manitoba-grown seed of a Russian apple by A. Heyer, Neville, Saskatchewan. The pale amber fruit ripens in early August and stays in season two or three weeks. Quality is fair. It is credited with being the most reliable apple for the northern regions, having surprising hardiness.

Other early varieties include Acheson, which is a large yellow apple, sub-acid, of medium quality. It is surprising that this hardy tree developed in Edmonton from seed of Delicious, a tender variety, planted by Mrs. J. H. Acheson. Breakey, a productive variety of small to medium size, from Blushed Calville seed at Morden, has good quality fruit of scarlet and red over amber. Horace, a Langford Beauty seedling from Ottawa, is a high quality dessert apple of Fameuse type, but harder. Lobo, a McIntosh seedling developed at Ottawa, is much harder than the parent.

Moscow Pear is a Russian early apple which seems to possess more winter hardiness than any of the other varieties imported during the last century by Budd and Gibb from northern Europe. Fruit of medium size is pale amber, white in flesh, and tender.

Patricia, a seedling of McIntosh from Ottawa, is harder than its parent. The fruit resembles McIntosh. A dessert variety of top quality. Fruit thinning is required to maintain commercial size. Victory, first known as Minnesota 396, carries McIntosh blood prominently. Although the tree seems harder than the renowned par-



Redcoat plum  
Melba apple  
Burgundy strawberry  
Early Richmond cherry

ent, it is less hardy than Prairie Spy and Fireside. Compared to McIntosh, the fruit is more oblate, somewhat more acid, and a longer keeper.

Probably the most valued standard apple in the plains area is Haralson, the Stayman-like, long-keeping apple from Minnesota. It is remarkable for hardiness of tree and its bountiful annual crop. It is proving much more dependable in the Canadian Prairies than most of the Russian apples.

Other winter varieties include Manitoba, a Duchess seedling from Morden, which carries no suggestion of its mother. The fruit, of medium size, is yellow with blushed cheek, flesh is fine-textured, crisp, juicy, spicy, and of very pleasing flavor. Season is until late February. Were the color a showy red, this apple would command a very high rating. Manitoba Spy is a seedling of Patten at Morden. The only similarity to its parent is its sturdy, durable tree. The large fruit suggests Northern Spy, but the flesh is greenish amber. A general purpose apple of good quality until late February.

Fireside, a cross-bred winter apple first known as Minnesota 993, promises to be valued over a wide range. The large fruit, colored bright medium red, is of excellent dessert quality. Prairie Spy, formerly Minnesota

(Continued on page 35)

# Citrus Variety Situation

By W. H. FRIEND

Extension Service, Lower Rio Grande Valley

**T**HE DEMAND for something new and more appealing to the consuming public in the way of new varieties has arisen as a result of the overproduction of standard "run of the mill" types. It is not necessarily because the old standard varieties, which have stood the tests of time, are outmoded; but is due more to the fact that new things and new ideas are more glamorous and more "exciting" than the old.

The Pink Marsh Seedless grapefruit is a typical example of a color variant from a most excellent parental stock, which outclassed its illustrious parent purely because pink has more eye appeal than the straw or honey color of ordinary grapefruit. Its offspring, the Ruby (red fleshed) grapefruit with the attractive blush on the outside, soon superseded the Pink Marsh variety in the hit parade of citrus varieties. It is the one new variety of citrus fruits which has attained widespread acceptance by producers, handlers, and consumers of grapefruit in all parts of the world within the past decade.

Standardization is so important in the merchandising

of perishables such as citrus fruits that growers in most production areas are loath to take a chance with new varieties. However, there is a rather insistent demand for varieties which have more consumer appeal. The renewal of interest in some of the old varieties, which were considered to be novelty types a few years ago, illustrates this trend very clearly. Citrus fruit producers in California and Texas would like to find varieties which will help solve the small fruit problem, while Florida and Texas growers are on the lookout for new varieties which will extend the harvesting season for late varieties through the summer months.

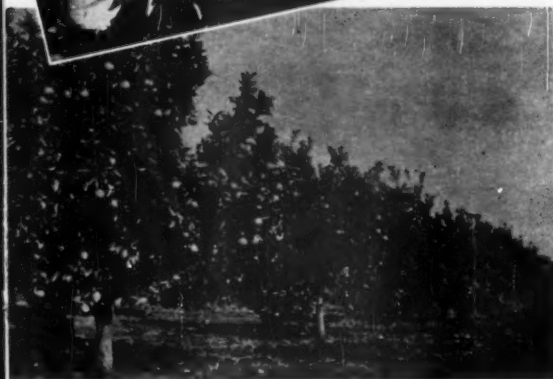
Ruby (red blush) grapefruit is secure in its place as the premier grapefruit variety. However, a systematic search is being made for variants which show more red color on the outside and which have flesh that remains firm and palatable late into the summer season.

Joppa (seedless) is an old variety that is finally gaining the grower recognition which we believe it deserves. It cannot compete with Hamlin in yielding ability but far outclasses that early, seedless variety in quality. A larger fruit variety in this early seedless class known as the Sanguinea grosse ronde orange has shown some promise in plantings at the Valley Experiment Station. This plant immigrant, which was brought in by the USDA Office of Plant Introduction, is probably worthy of exploratory trial. As its name indicates, it is a large, highly colored, round orange. It is about equal to Valencia in size and appearance and has flesh of excellent texture and flavor.

Valencia is unchallenged as a main crop, late variety, but larger fruit strains are wanted in California and Texas; and Florida and Texas could use a later variety that will hold up under the heat of summer weather in the near tropics. Also, Texas could use an early, seedless strain of Valencia that would advance the season for shipping Valencia type oranges to December 1. An early ripening, seedless variant from a Lue Gim Gong tree has been discovered, which may prove to be worthy of exploratory trial. The Pope orange is a variety which

(Continued on page 59)

Left—Valencia oranges. Below, left—Joppa orange, a seedling; right—Ruby grapefruit.





# Recent Peach Introductions



Triogem, Sunhigh,  
Fireglow

Dixigem



By JOHN H. WEINBERGER  
USDA, Fort Valley, Ga.

**W**ITH a steady procession of new varieties being developed, the peach variety picture is changing rapidly. A recent survey by Dr. W. H. Alderman of the Minnesota Experiment Station showed that 23 United States Experiment Stations and three Canadian Stations were engaged in breeding new peach varieties. They introduced 34 new varieties between 1940 and 1947, and it is anticipated that 63 additional varieties will be introduced in the next five years. In addition, individuals and commercial nurseries are expressing their interest in improving peach varieties by introducing new peaches at the rate of 40 or 50 a year, according to the 1945 "Index" of the American Pomological Society.

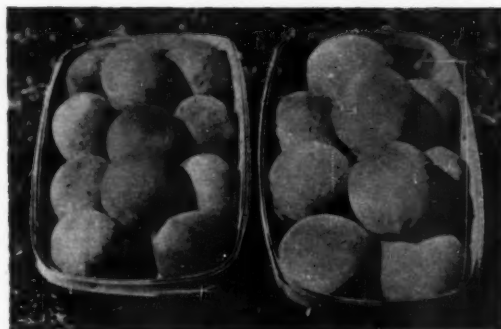
Most of the new varieties are superior to the old sorts and are worthy of trial, but it takes time to determine which are the best. Furthermore, these varieties are generally suitable for many peach-growing sections. Except for the consideration of winter hardiness for plantings in the North, low chilling requirements to break the rest period of the buds in the extreme South, and particular susceptibility to bacterial spot in the Atlantic Coastal Plain section, a variety that is successful in one locality will usually be successful in other locations also. The peach industry does not seem to need special varieties for different peach-producing areas to the same extent as is the case with some other fruits, such as strawberry.

The Elberta variety still dominates the fresh peach

industry, but we see a tendency for growers to plant more varieties to lengthen their harvest season, and to plant earlier ripening varieties. With the principal markets and centers of consumption for peaches in the North, the planting of earlier varieties in more northern districts is bringing them into competition with southern producing districts in these markets, whereas formerly the competition was largely narrowed to sections to the east or west. This means that new varieties to be successful on the principal markets must be able to compete with Elberta peaches shipped from other districts. As now grown, Elbertas are available to buyers from late June to late September.

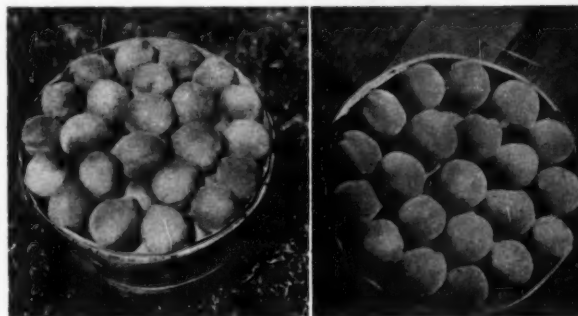
The Mayflower, earliest of present-day commercial varieties, is losing out in popularity, but as yet no new variety gives promise of replacing it in its season of ripening. The Dixired variety, a USDA yellow-fleshed clingstone introduction of high color and good shipping quality, is the earliest ripening new peach that is gaining commercial importance in the South. It is rapidly

(Continued on page 46)



Goldencrest

Sullivan Early Elberta



Early-Red-Fre

Southland



# Likely Grape Varieties

## CONCORD STILL LEADS IN EAST

By GEORGE D. OBERLE, *Virginia Experiment Station*

**N**URSERY catalogs still prominently feature the Concord grape, which heads the list of such standard, reliable varieties for the East as Delaware, Catawba, and Niagara. Introductions of more recent date, which have won recognition from both home and commercial growers and which are now being offered by many nurserymen, are Ontario, Portland, Fredonia, Seneca, Golden Muscat, and Sheridan. In addition to these, a number of new varieties produced by the New York Experiment Station are worthy of consideration for planting and are listed in this article in the order of their season of ripening.

Van Buren is the earliest blue grape now available, ripening nearly four weeks before Concord. It is a

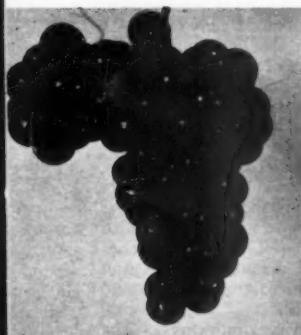
slipskin seedling of Fredonia crossed with Worden. The flavor and quality are much like that of Worden and, unfortunately, the skin, like that of Worden, is rather tender and inclined to crack. The vine is as hardy as that of Concord, nearly as productive, and while slightly less resistant to downy mildew, seems

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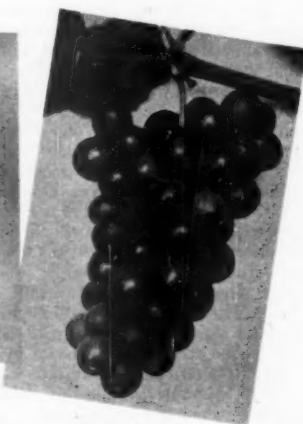
## CALIFORNIA HAS FIVE NEW VARIETIES

By CLARON O. HESSE, *University of California*

**N**EW grape varieties of promise in California include Cardinal, a USDA introduction. This is an early-maturing table grape of considerable promise and popularity. The Viticulture Division of the University of California has introduced table, juice, and wine varieties in recent years. Scarlet is an exceptional juice grape, especially for home use, but is also suitable to commercial juice production. It overcomes the characteristic weaknesses of the eastern Concord as that variety grows in California. Perlette and Delight are two new seedless table grapes. Perlette is an early maturing type, and Delight is also earlier than the popular Thompson Seedless, but not as early as the Perlette. Both have larger berries and better quality than Thompson Seedless, and the Perlette has out-yielded the Thompson Seedless in trials to date. Ruby Cabernet and Emerald Riesling are two new wine grapes which offer definite advantages to growers and vintners in regard to season, yield, and quality wines of the best type.



Van Buren



Dunkirk



Steuben



Buffalo



Interlaken Seedless



Cardinal

# Small Fruits of Promise

By G. L. SLATE, New York Experiment Station

**S**TRAWBERRIES are the most widely grown of all fruits in North America and this wide adaptability, combined with their popularity and the rapidity with which new varieties may be produced, has resulted in a host of new sorts from all parts of the country. From Ottawa, Canada, to Louisiana, and from New Jersey to California, strawberry breeders are producing new varieties. Most of these are adapted primarily to the special conditions for which they were developed, and growers in other regions should not expect too much from them.

Resistance to red stele has been sought by the berry breeders and among the new resistant sorts are Temple (Md.), Sparkle (N.J.), and Fairland (USDA). As they grow at the New York (Geneva) Experiment Station all are vigorous, heavy yielding varieties well worthy of trial for market or home use in regions with similar conditions. All three are attractive with a bright glossy finish, firm and of excellent quality, Fairland being somewhat inferior to the others in this respect. Sparkle is very good for freezing. In Oswego County, New York, a section noted for its fine strawberries, Sparkle is being planted extensively.

In the high quality list for home use, Fairpeake and Suwannee (both USDA) are near the top of the list. The former is dark red, but glossy and firm. The vigorous plants are hardly productive enough for a market variety. Suwannee is a long conic, light red, moderately firm berry that was introduced primarily for the Far South, but it has performed well enough at Geneva to be worth recommending for home use. Midland (USDA) rates high for its quality and suitability for freezing but is not always productive enough for market.

Far Western breeders have introduced Brightmore (Ore.) and Shasta, Sierra, Donner, Tahoe, and Lassen, all from California. Brightmore produces many berries at Geneva, but the plants do not produce enough foliage to mature them properly. In Oregon it is recommended for freezing and preserving. The California varieties were developed to resist certain diseases. Shasta and Tahoe are resistant to Verticillium wilt, and Shasta and Donner resist powdery mildew. Shasta, Lassen, Sierra, and Tahoe are yellows resistant in varying degrees. The fruit characters are described as excellent.

The Louisiana Station has introduced Klonmore and Konvoy, which are well adapted to Louisiana but are much too small at Geneva. The most recent Louisiana variety is Marion Bell, a shipping berry said to be resistant to leaf spot and scorch. Tennessee has contributed Tennessee Shipper, a very firm, tart berry, Tennessee Beauty, and others adapted to that State.

Robinson is a new variety from Michigan that is receiving considerable attention. The plants are vigorous and are produced in great profusion, a characteristic that commends a variety to the seller of plants, but the berries leave much to be desired, being only fair in quality, easily bruised, and rotting badly in wet weather.

The introduction of the Indian Summer red raspberry with its characteristic of producing two crops of berries in one year has aroused much interest in this class of ber-

(Continued on page 55)

AMERICAN FRUIT GROWER

Sparkle is fine for freezing purposes.

Suwannee is good for home use.

Temple is resistant to red stele disease.

Chehalem blackberry is good for freezing.

Cascade is excellent blackberry variety.

Pacific blackberry has high quality.

September is a two-crop red raspberry.

# Soft Tree Fruits for Pacific Coast

## FOR CALIFORNIA

By CLARON O. HESSE, University of California

**T**HE FINEST available varieties are a necessity to the California fruit grower. Only such varieties, coupled with modern orchard practices, make it possible for him to compete on distant markets, or with progressive neighbors for the local markets.

The greatest interest in new varieties is naturally in those fruits which promise the most evident and immediate returns. Over all the large producing areas of California, a variety of peach or nectarine will mature at approximately the same time. Under such circumstances, a new variety a week earlier or later than any good standard variety will have a seasonal niche that may be readily exploited.

On the other hand, a given variety of apricot, cherry, pear, or shipping plum will ripen at very different times in the various producing areas. With such fruits, a new variety must be better than the best variety grown, or it will be in unequal competition from that best variety grown in another place. Such fruits do not offer the seasonal advantages which may be inherent in a new peach or nectarine variety, but must prove their merit against the best varieties presently known. They are not so readily accepted by growers.

Then there are those areas where none of the common fruit varieties do well because of the climate—as southern California—where a completely new list of varieties is needed, and is being supplied. Finally, there is the search for varieties showing really fundamental improvements to raise the standards for the whole industry, and to meet certain processing demands. The latter covers all the fruits grown.

Because interest in new peach varieties is the most active in California at present, and because of the large number of new varieties being grown and tested, the  
(Continued on page 43)

## BRITISH COLUMBIA

By A. J. MANN and F. W. L. KEANE  
Dominion Experimental Station, Summerland, B. C.

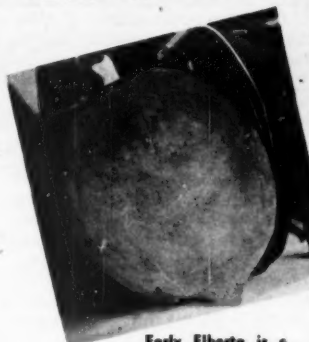
**T**HREE promising new stone fruits which have resulted from the breeding project conducted at the Summerland Experimental Station are Reliable apricot, Van cherry, and Spotlight peach. All three are being planted for extended commercial trial.

Reliable apricot is a cross of Wenatchee Moorpark with a seedling. The tree is vigorous and of desirable growth habit. It has been a heavy annual bearer and the crop is well distributed, sets rather thickly, and requires moderate thinning. The fruit is of medium size, somewhat of Tilton shape, and of attractive orange color with a red blush. It is outstandingly firm, dry in texture, of fair quality, and very uniform in all respects. Tests indicate that Reliable is satisfactory as a canning variety.

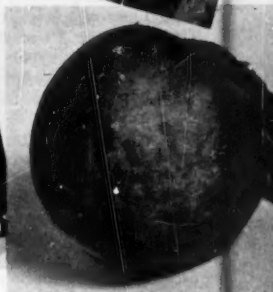
(Continued on page 42)



Robin peach is for southern California.



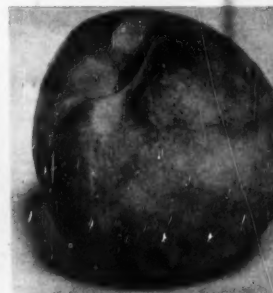
Early Elberta is a July Elberta strain.



Redhaven is a high quality early peach.



Royal is an outstanding apricot variety.



Rio Oso Gem is being planted extensively.



Merrill Gem starts the peach season.



# Nut Varieties of Merit

## CHESTNUTS, BLACK WALNUTS and PECANS

By J. C. McDANIEL  
Northern Nut Growers Association, Inc.

CHINESE chestnuts were introduced into the United States in 1906 and first grafted about 1932, but most trees planted are still seedlings. All varieties are relatively new, but some named in the 30's are already being discarded. Hobson, of Georgia origin, is still good in Tennessee and south, but the nuts run too small northward. Zimmerman is doing well from Tennessee to Pennsylvania, but, like most of the species, requires particularly good sites in the Middle Atlantic States. Abundance, introduced in 1940 from Oregon, has good reports from the southern Ontario fruit belt and Pennsylvania, to Tennessee and west to Oklahoma, where it is rated relatively drought-resistant. Yankee (Conn. Yankee) has had some favorable reports from southern New England and Virginia, but is difficult to propagate.

Three new varieties, Kuling, Meiling, and Nanking, were selected in a USDA planting near Albany, Ga., where they had been outstanding among several hundred good seedlings, and nut nurserymen started increasing them in 1948. In Georgia, all three have been productive and bear large, sweet chestnuts with good keeping quality.

These, and other new varieties being selected in seedling orchards of the southeastern and Middle Atlantic States, promise eventually to put chestnut orcharding on a commercial basis in these States. West of the Alleghenies and north of the Ohio, and in New England, the Chinese chestnut is described as a "peach proposition" with a chance of

success only on the most favorable orchard sites, such as peaches require. The outlook for it in the Pacific Northwest is also not too favorable, because the Chinese chestnut, like the pecan, has a high heat requirement necessary to grow large, well-matured nuts. In the Southeast, Chinese chestnuts may be grown, like pecans, even south of the commercial peach area.

(Continued on page 37)

## PECANS FOR THE SOUTHEAST

By G. H. BLACKMON  
Florida Agricultural Experiment Station

NO NEW varieties of pecans have been introduced and widely disseminated throughout the Southeast during the past few years. The Mahan, introduced in 1926, was the last variety to be widely planted. The tree, which is susceptible to scab, produces a large nut. The Elliott was introduced more than 20 years ago but it has not been widely distributed. However, there are a few plantings in northwestern Florida where it has proven prolific and free of diseases. The nut is small and is especially adapted to commercial shelling operations.

The Curtis is an old variety extensively grown in northwestern Florida and some sections in southeastern Georgia. The tree is prolific and free of diseases, yielding a small to medium sized nut. The Stuart, another old variety, is probably grown over a wider area than any other

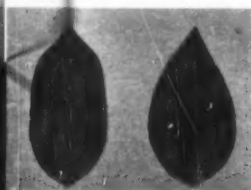
(Continued on page 51)

## TEXAS VARIETIES

By FRED R. BRISON  
A. & M. College of Texas

PECANS in Texas are grown in an area that extends, roughly, 500 miles westward from the eastern border of the State. Rainfall, relative humidity, and soil conditions vary widely in this area, and these factors are considered in the selection of pecan varieties for a given locality. In general, only the so-called Eastern varieties are grown in the eastern part of the State and within 100 to 150 miles of the coast. High annual rainfall and high relative hu-

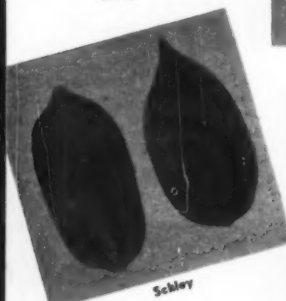
(Continued on page 50)



Curtis



Stuart

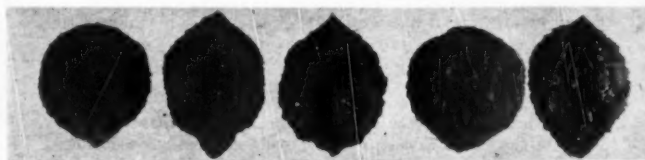


Schley

24



Mahan



Ogden

Stambaugh

Cooper

Thomas

Ohio

AMERICAN FRUIT GROWER





# NATIONWIDE FRUITS



## CITRUS

● The citrus industry of California is facing a baffling problem with the production in many groves of oranges of small size, and an intensified search is under way to determine the causes.

County agents of the eight southern citrus counties, under the direction of the Citrus Experiment Station at Riverside, have, according to *Citrus Leaves*, launched a program which includes field tests and careful observations in 100 groves in each of the eight counties. Included are groves in which sizes have been larger than average and groves bearing sizes noticeably small.

In each of the two groups advisors will watch carefully everything that happens or is done by the growers, from a study and comparisons of pest control, fertilization, soil types, etc., to fruit sizes and quality.

Packing houses, marketing organizations, and the University of California are assisting in these efforts to diagnose this latest problem of California citrus growers.

● Nylon has entered the field of fruit growing in the form of picking bags. The Corona Foothill Lemon Company of California has been testing bags made of this tough, durable, yet lightweight fabric and reports that their pickers like them. The bags weigh from 22 to 25 ounces and carry up to 85 pounds of oranges, lemons, or grapefruit.

## GRAPES

● Balanced pruning and the umbrella method of training the Fredonia grape are advocated by the Geneva, N. Y., Experiment Station. Higher yields were recorded as the severity of the pruning decreased in tests conducted by the Station specialists the past four years. More shoots also remained to bear grapes, and with umbrella system of training more and heavier clusters were formed per shoot as compared with other methods of training.

The pollen from lightly pruned Fredonia vines also was more effective in producing a set of fruit than from severely pruned vines. The vigor of the vine was not impaired, in fact, was increased by the light pruning program.

● Technology is constantly being applied to the growing and handling of fruit in California. Recent efforts along this line have resulted in the development of specially designed tunnels which precool grapes in one hour. The tests are being made in two commercial coolers modeled after a design developed by W. T. Pentzer and W. R. Barger, USDA plant physiologists.

Currently, it takes 14 to 18 hours to precool grapes in cold storage rooms or in the refrigerator cars, and shipment is generally delayed a full 24 hours. In a period of declining markets, such a lengthy delay may mean heavy losses to the shipper.

## BERRIES

● Sioux is the name of a new winter-hardy June-bearing strawberry just released by the USDA for home gardens and local markets in the northern and central Great Plains region.

The new berry, which has a wild strawberry aroma, is the result of breeding work by Dr. LeRoy Powers of the USDA's Cheyenne (Wyo.) Horticultural Field Station, where it has been under trial for eight years. Tests have also been made in Nebraska, Colorado, Kansas, and Iowa.

The variety has proved winter hardy without protection of any kind, very vigorous, drought tolerant, and resistant to several diseases, including leaf spot. Yields have been greater than commercial varieties grown in the region.

Plants are available at present only to experiment stations and nurseries.

● The Mahantango Strawberry Auction in the heart of the anthracite coal region of Pennsylvania handled in 1948 the biggest volume of berries in its history—9000 24-quart crates, for which growers received an average price of \$7.24 per crate.

An unsatisfactory marketing situation in the Mahantango Valley in 1940 caused growers to resort to co-operative means of disposing of their berries. Now, the eight-year records

show that better prices have been consistently received for their fruit and that the premium prices paid for fancy fruit have been an incentive for growers to improve the general quality of their berries.

## APPLES

● Oversized fruit placed in rows at the end of the apple box receive 66 per cent of the bruises in packing house operations, according to the latest bruise study of the Washington State Apple Commission.

The study also revealed that high-colored apples appear to be smaller than they actually are and as a result are often placed in the end positions. Another principal cause of bruising is misplaced and badly aligned fruit.

The study also exploded the commonly held theory that a relationship exists between bruising and weight or amount of bulge in the pack. Extra paper in the pack was found to pay dividends. The *Wenatchee Daily World* reports, also, that there was little evidence to show that the fastest packers are the best packers.

A new film, "Standard Pack Facts by Johnny Apple," incorporating the results of the bruise study, has thus far been shown to packing house workers in 43 warehouses in the States.

## PEARS

● The Orient pear, a Tennessee Experiment Station introduction, is being recommended for planting in the South. As grown in the Station's orchards at Knoxville, it has proved both fire blight and leaf spot resistant.

The large, vigorous trees of the variety are said to have an open center and thus require little pruning, and to produce good annual yields. Blooming period is several days later than Kieffer with sufficient overlap for it to be pollinated by the earlier variety.

The fruit, which in Knoxville ripens in mid-August, averages large, often 3¼ inches in diameter. The thick, tough, rather rough skin covers a creamy white, mild-flavored flesh of good texture. The fruit is attractive when canned. Since it keeps well in storage, the canning operations can be spread over a considerable period.

Several southern nurseries are handling the variety.



## • Vital Discussions Stir Growers at Meetings • New Jersey Debates Price Supports

**WASHINGTON**—Fruit leaders from all sections of the country gathered in Yakima, December 6-8, for the joint meeting of the Washington State Horticultural Association and the American Pomological Society.

More than 1000 growers heard Charles Morrison of Zillah open the meeting by calling for production of more quality fruit per acre. Rodgers Hamilton, Okanogan, succeeded Morrison as president of the Washington association. Other officers elected were Frank Worthen, Yakima, first vice-president; Edwin Smith, Wenatchee, second vice-president; John C. Snyder, Pullman, secretary-treasurer. The Gilbert memorial cup, gift of Elon, Horace, and the late

judging the effectiveness of airplane spraying since it was not a heavy codling moth year. He reported that worm damage in orchards checked varied from 0 to 5 per cent, with the average being 1 to 2 per cent.

Grady Auvil of Orondo said that blossom thinning sprays and the use of Parathion have markedly reduced production costs. Pest control costs at his orchard, he stated, were reduced from 17½ cents per box for 1944-47 to five cents per box in 1948 through use of Parathion. All spraying was done with a stationary spray system. With chemical thinning Auvil stated that he has been able to reduce his production cost per box from 12½ cents to 2½ to 3 cents.

American Pomological Society President Stanley Johnston directed attention to the national peach crop which has increased 29 per cent whereas national population increase has been only five per cent. Johnston suggested five methods for further increasing consumption: 1) better produce for consumer; 2) more mature peaches for market; 3) less brown, rot and insect injury; 4) smaller and more attractive packages; and 5) higher quality in processed peaches.

Two Wilder medals were awarded by Dr. W. P. Tufts of California for the APS, one to F. C. Reimer of the Oregon Experiment Station for outstanding work in pear culture and the other to the University of Minnesota fruit breeding station.

APS officers for 1949 are John T. Bregger, Clemson, S.C., president, and W. D. Armstrong, Princeton, Ky., secretary-treasurer. Charles Morrison, Zillah, Wash., was named to the board of managers.

**NEW JERSEY**—Ernest S. Race of Ernella Fruit Farm at Belvidere was elected

president of the New Jersey State Horticultural Society at its 74th annual meeting, held at Atlantic City. He succeeded Raymond Anderson of Bridgeboro.

Feature of the three-day session, the best attended in many years, was the panel discussion conducted by State Secretary of Agriculture W. H. Allen on the need for a Government support program for fresh fruits and vegetables. For nearly a year the subject has been discussed at local and county conferences throughout the State. The views expressed at Atlantic City indicated that growers are far from unanimous in advocating support for perishables. Although a vote of four to one was recorded in favor of supports, a total of only about 50 votes was cast, as most of the audience refrained from voting.

On the other hand, there appeared to be some general interest in the support program provided it could be enacted to serve as a standby measure available for protection when needed in an emergency. Some misgivings were evident in regard to enforcement of mandatory grading, quotas, and other possible restrictions.

At other sessions apple growers expressed concern over increased cost of production due principally to the high prices of new spray materials and the expanded spray schedules. Improved cultural practices to maintain high yields was acknowledged to be the only means for meeting such expense. Favorable experiences with power pruning equipment were reported by six growers.

Dr. Norman F. Childers presented the current New Jersey research program which includes peach and apple breeding, an orchard management project, expansion of graduate studies in nutrition, and continuation of small fruits studies especially with blueberries and strawberries. A new mid-season strawberry variety, Redcrop, was announced by the Small Fruits Committee.

The New Jersey Peach Council and Peach Industry Committee announced an

(Continued on page 40)

### AIR CRASH FATAL TO THREE GROWERS

**WISCONSIN**—Horticulturists in this State were shocked and grieved on December 5 when the news came that Karl S. Reynolds, secretary of Reynolds Bros., Inc., largest cherry and apple growers in Wisconsin; Lougee Stedman, manager of the Door County Fruit Growers Co-op; and Ervin Kossow, manager of Reynolds Bros., Inc., all of Staragon Bay, were killed in a plane crash the evening of December 4.

Mr. Reynolds was president of the National Red Cherry Institute and Mr. Stedman was a member of its board of directors. Both were nationally known.—H. J. Rohmlow, Secretary Wisconsin Hort. Society.

Curtiss Gilbert, was presented to the association by Ralph Sundquist.

An outstanding talk of the first day was given by R. L. Webster of Washington State College. Dr. Webster reported on the hazards of the newer insecticides to human health. Stating that most of the ill effects from spraying result from exposure to tetraethyl pyrophosphate, he said the most common symptoms are soreness of the nose and throat; on occasion the bronchial tubes are affected. However, no residue problem is involved with HETP since it volatilizes rapidly, Webster reported.

Talking on decay resulting from apple handling, Edwin Smith, USDA, stated that actual counts showed that apple bruising ranged from none to 447 bruises per 100 apples picked. He found that pickers were generally interested in how good a job they were doing and that checking on their work resulted in marked improvement in picking.

David Brannon of Washington State College stated that the cost of airplane spraying averaged \$87.34 per acre in 20 orchards surveyed this season, with most orchards having three air applications. Brannon said this season was not a good example for

### THIRTEEN PAST PRESIDENTS MEET AT YAKIMA



The recent joint APS-Washington State Horticultural Association meeting in Yakima, Wash., was luckily favored with the presence of the 13 past presidents of the association shown in above photo. Reading from left to right: Roy E. Smith, A. L. Strauss, C. L. Robinson, Jesse Childs (foreground), J. A. Van Valkenburgh, Curtiss Aller, C. F. Morrison (retiring president holding Gilbert memorial cup), Earl Barnhill, Ralph Sundquist, J. Howard Wright, W. M. Meikle, Roy Larsen, and Harold Copple.

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“Black Leaf”  
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The effective non-wash cover spray for codling moths, leaf hoppers, and grape berry moth. Being a non-volatile or “fixed” nicotine, it is a stomach poison as well as a contact poison. Promotes improved color and “finish” of fruit.

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# MARKETING

## THIS QUESTION OF PRICE SUPPORTS

● Anyone with an ear to the ground can detect a growing movement by those who believe that fruit should receive increased government subsidies in the form of price supports. Whether or not price supports are the answer to marketing problems of fruit growers is a question which has vigorous supporters on both sides although the majority seems still to be undecided or unaware of the issues involved.

The government price support program as it now stands includes the so-called basic commodities, corn, wheat, peanuts, rice, tobacco, and cotton, and the Steagall commodities which are hogs, poultry, eggs, soybeans, flax, potatoes, dried beans, and peas. Over the past two fiscal years cost to the government of price support operations has amounted to 68 million dollars. However, if prices fall so that price support operations become extensive, cost to the government could be huge amounting to billions of dollars in payments and loans.

This situation leads to the charge that the government is favoring certain farmers and, thereby, discriminating against others since supports are extended to certain commodities only. In Florida Senator Claude Pepper of the Senate Agricultural Committee has declared that one of his principal objectives when Congress reconvenes will be to gain support prices for citrus fruits which will guarantee at least the cost of production to growers. The New Jersey State Horticultural Society has taken the lead in attempting to crystallize opinion regarding support prices, and at their annual winter meeting the question was put to vote. As reported by Fred W. Jackson in State News (p. 26) although a vote of four to one was recorded in favor of supports, a total of only 50 ballots was cast as many did not vote.

In considering the problem of price supports it is well to realize that fruit is now receiving governmental aid although subsidies are used only when the occasion warrants and not when prices drop to a prescribed level. These funds are used at the discretion of the Secretary of Agriculture. The present dried fruit purchase program, and recent purchases of citrus juices are all government subsidies. This

type of subsidy is more easily applied to a perishable crop like fruits than are price supports.

Price supports carry with them a necessary evil — acreage allotments and marketing quotas. It is relatively easy to control the acreage of annual crops like corn, wheat, and potatoes, but it is more difficult with fruit where an investment of many years and considerable money is involved. Also price supports are applied with least trouble to a standard crop easily stored. The different varieties and grades of fruit together with storage problems plus difficulties in production restrictions could lead to a welter of directives and red tape.

Price supports could mean considerable governmental regulation for fruit growers. If unwisely administered, artificially established price floors might also react in a similar way to price ceilings during the war when the incentive to produce quality fruit was removed with its subsequent harm to the industry.

And there are other considerations. Will price supports applying only to the six basic crops and 13 Steagall commodities encourage a gradual shift from non-supported crops to supported crops with consequent reduction in the size of the fruit industry? Or will subsidy money poured into the national economy through certain farmers help to insure a prosperous overall economy with resulting fair prices for fruit?

In the final analysis the best answer

to fruit marketing problems is group action by growers themselves. On the one hand the possibilities of working together is seen in the California Fruit Growers Exchange; on the other hand the difficulties are seen in the Florida citrus industry today which in the hour of its greatest peril finds it impossible to get together to avoid disastrous price cutting. If growers cannot solve their own problems, the government must step in; but it seems apparent that grower-initiated action is much to be preferred.

## PLANT MORE GRAPES, SAYS WELCH

● Eighty years ago a doctor made history by producing a non-alcoholic health-giving fruit drink. The beverage was grape juice and the man was Dr. Welch who later developed the Welch Grape Juice Company into a large manufacturer of grape products.

Today Welch processes sour cherries, apples, plums, apricots, peaches, and strawberries; but grapes are still the main product. To insure a steady source of supply to their grape processing plants, Welch in 1944 developed a plan which, in the words of executive vice-president R. T. Ryan, is a successful marriage between private business and grower co-operatives. What Welch did was to help organize all local co-operatives into regional groups. Welch then signed a 20-year contract with the regionals by which co-op members agree to deliver all their grapes to Welch. In return, members are paid the end price of the processed grape product, less cost and a 10 per cent cut to Welch.

Welch is now encouraging growers in some grape belts to plant more grapes in order to procure a larger supply. "We still don't know how many grape products we can sell," says Ryan. "In the case of juice, for instance, we never had a sufficient supply to carry out plans for national distribution of our Welchade—natural pure grape drink, designed to capture part of the tremendous soft drink market."

Western grape growers, discouraged by low prices this year, do not share Welch's optimistic attitude. But Welch's joining up of processor and grower co-operatives may be one key to a more stable grape industry.

Surely There Must be Room for Our Little Nell



Courtesy Orlando Morning Sentinel  
As Viewed by a Florida Newspaper





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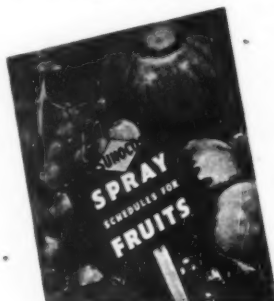
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PLEASE PRINT

## ARE YOU PLANTING GOOD NURSERY STOCK?

By H. B. TUKEY  
Michigan State College

**N**O PROSPECTIVE parent in his right mind would go to a nursery and from it secure, sight unseen, the heir to the family name and fortune, the one upon whom to lavish attention, care, and high hopes for the future. Yet, too often fruit growers pay little heed to the source or the kind of nursery stock upon which their future depends. Perhaps it is a tribute to the nursery industry that this is so, but it is not good business. The selection, care, and planting of nursery stock is too important to be left to chance.

A fruit grower owes it to himself to know his nurseryman, to know the trees he purchases, and to know how to handle them when he receives them. First of all, a fruit tree is two individuals growing together as one. Onto some seedling or clonal rootstock material the desired scion variety is budded or grafted.

The rootstock is important and is becoming increasingly more so as the fruit industry advances to even higher stages of refinement. Are the sour cherry trees on the mahaleb rootstock, or on the mazzard rootstock? There is an advantage in the mahaleb where light soil and winter cold are limiting factors. There are advantages in the mazzard under other situations. Are the plum trees on peach seedlings, myrobalan seedlings, or perhaps St. Julien? The myrobalan is generally preferred. Are the pear trees on French pear, Calleryana, or Serotina roots? The French pear is best suited for most situations.

As for the scion variety, there are problems of insects and diseases and trueness-to-name to consider. Fortunately, the nursery inspection services of the various states are performing an admirable service in certifying trees free from pests, and in this program nurserymen are co-operating fully. Also, trees in the better nurs-

eries are regularly inspected for trueness-to-name, thanks to the leadership of Dr. J. K. Shaw of Massachusetts, his colleagues, Dr. O. C. Roberts and Dr. A. P. French, and others associated with them. There is no longer excuse—barring some accident—for trees being not true to name.

Still lurking in the background are virus troubles. On the Pacific Coast they are extremely serious. In eastern circles they are less severe but present a constant menace in cherries, peaches, plums, and the small fruits. Only through close co-operation of the nursery industry, the fruit industry, the inspection services, and scientific staffs will they be held in check.

Then there is the matter of how the nursery trees are grown. A tree makes itself. It can be no better than the soil, the fertilizer, and the cultural practices that surround it. When slugs or leaf spot defoliate prematurely, the stock may lack the food reserves that make a good tree. Immaturity and too early digging may result in poor stock. Severe winter cold may seriously injure young trees. Poor handling may result in frost injury to tender roots or drying out.

Orchardists, therefore, are finding it increasingly important to know their nurseryman, to see the trees he grows, to know how he handles them, to understand how they have been inspected for insects and diseases and for trueness-to-name. Just as he has confidence in the family doctor, he should have confidence in his nurseryman. There are no "bargains" in nursery stock, and, conversely, there is no profit to a nurseryman in excessive prices or in sharp practices. The fruit industry and the nursery industry are interdependent. The fruit grower can afford only good stock, and from a dependable source.



Nursery stock is no better than the soil, the fertilizer, and the cultural practices that surround it. This is a good block of two-year-old pear trees of which the nursery company can be proud and with which some orchardist will be well satisfied.

AMERICAN FRUIT GROWER

## APPLE AND PEAR VARIETIES FOR THE EAST

(Continued from page 17)

istics, along with high dessert quality, make this variety a logical supplement for Stayman and Rome. Melrose is not susceptible to Jonathan spot. The fruit is fine-grained, juicy, mild-flavored, and excellent for cooking.

The New England area has tried for decades to find a substitute for the biennially-bearing and cold-tender Baldwin. No logical substitute has yet been found. For those growers who still need Baldwin to satisfy their markets for a winter apple the Galbraith strain is suggested. This is an attractive sport which develops a snappy, uniform red color, but, unfortunately, appears to have the weaknesses of its Baldwin parent.

Another winter apple attracting some favorable attention is the Tuley. This apple is a Winesap seedling from Indiana. The fruit is less susceptible to cracking than Stayman and is of value because of this characteristic.

Although Cortland is not a new variety, it is of interest to fruit growers. This apple appears to be making continued progress in popularity throughout the northeastern section of the country. In a recent survey by the American Pomological Society, Cortland was rated in second place by growers in the New England States. Over 70 per cent of the growers in the North Central and North Atlantic States likewise voted favorably on this variety.

Macoun is gaining slowly in popularity in the New England area. A report from Michigan indicates that this variety frequently sets good crops of fruit during cold, rainy weather when other varieties located nearby produce very little or no fruit. Macoun is a cross of McIntosh and Jersey Black. In some seasons the skin color may be too dark. Good crops of fruit are borne annually in most localities.

Milton appears to be gaining slowly as a favored variety. A report from New York states that considerable trouble has been experienced because of bud tenderness. This variety is a cross of Yellow Transparent and McIntosh, ripening two weeks before the latter variety. The attractive fruit is of medium size and of high dessert quality. The tree bears annually, starting at a relatively early age.

Early McIntosh has the same parentage as Milton but ripens a week or 10 days earlier. This variety is of value as an early red apple for local sales. The tree tends to bear heavy crops biennially. The fruit is of medium size with a sprightly, aromatic flavor.

Melba is another early variety of the McIntosh type which is gaining in

favor in many sections. This apple is especially desirable to supply fruit of excellent dessert quality to roadside markets.

Pears are of minor importance in the eastern United States because of fire blight. Until this problem is solved, the industry will remain a hazardous occupation.

The Baldwin pear has attracted considerable attention in South Carolina because it has had practically no blight in the test orchards at the Experiment Station. The skin of this variety is yellow. The flesh is of good eating quality and contains fewer grit cells than other fire-blight resistant varieties grown in South Carolina at present. The trees are vigorous and sturdy in growth, and very productive. The fruit will have better flavor and quality if picked before it matures and is allowed to ripen in storage.

The Richard Peters pear is another blight-resistant type which is now receiving considerable attention. This Kieffer seedling was developed at the Pennsylvania Experiment Station. The fruit is slightly larger than Seckel, has a green skin, and long neck somewhat like Bosc in shape. Although the flesh is not of high quality, it is much more tender and less grainy than Kieffer. The flowers are self-sterile. The yields of this variety have been somewhat erratic, although at least a partial crop is borne every year.

Gorham is declining in popularity in most areas because of low yields. This variety is susceptible to blight, although not quite as seriously as Bartlett and Bosc. In most northeastern sections Bartlett and Bosc are the preferred varieties in spite of their susceptibility to blight.

Seckel remains important as a small, high quality pear which is quite resistant to blight. Dana Hovey appears promising in some sections.

Cope's Seedless is being planted by some growers. This variety is very susceptible to blight and only average in yield. The fruit quality and size are good. In plantings with Bartlett the fruit is usually seedless but some seeds may develop when strong pollinizing varieties are located nearby.

Ewart is attracting some attention as a pear of about average size, quality; and yield. The tree is moderately resistant to blight, but much more susceptible than Kieffer or Seckel.

Cayuga is similar to Ewart in blight susceptibility but produces somewhat higher yields on trees which are above average in vigor. The fruit is of good size but may be difficult to ripen properly. Dropping may occur prematurely in some seasons.

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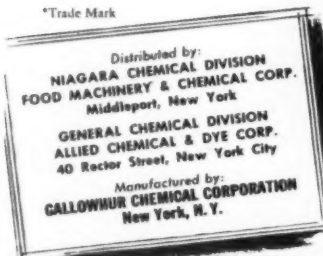
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- A low cost spray program — 1 gallon makes 800 gallons of spray.
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- Leaves no visible deposit
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- Effective too, for brown rot blossom blight of cherries and peaches

<sup>\*</sup>Trade Mark



# HISTORY OF HORTICULTURE

## THE ELBERTA PEACH

By STANLEY JOHNSTON

South Haven, Mich., Experiment Station

**E**LBERTA, the world's most widely grown peach variety, originated from a seed of Chinese Cling planted by Samuel H. Rumph of Marshallville, Ga., in the fall of 1870. Mr. Rumph believed that the pollen parent of Elberta was Early Crawford, but there is no proof of this belief.

Mr. Rumph gave another Chinese Cling seed from the same lot to L. A. Rumph and from it came the famous white-fleshed Belle variety, commonly known as Belle of Georgia.

From one small lot of seed Mr. Rumph was unbelievably fortunate, for he produced the most important yellow-fleshed peach variety yet discovered, and one of the most important white-fleshed varieties. This illustrates the importance of chance in the development of new fruit varieties.

Elberta became popular in the South in a comparatively short time and by 1889 it was placed on the approved list of varieties sponsored by the American Pomological Society.

The variety appeared in Michigan about 1890, and in that year, Roland Merrill, prominent peach grower of the Benton Harbor, Mich., area, announced at the State Horticultural Society meeting that he was "plunging" on a new variety known as Elberta to the extent of a thousand trees.

By 1920 eighty-five per cent of the peach trees in Michigan were of the Elberta variety, and the same situa-

tion was true in many other states. This was too many trees of any one variety, no matter how good, as such concentration of peaches maturing at one time resulted in harvesting problems and market gluts. Since then, improved, earlier maturing varieties have reduced the percentage of Elberta peach trees in Michigan orchards to about one-half.

Elberta has a few important weaknesses, but they are overshadowed by its many strong points. Its weaknesses include lack of bud hardiness in winter and a somewhat bitter flavor in northern areas in cool, wet seasons. These are not major weaknesses in the South and on the Pacific Coast.

Probably the outstanding strong point of the variety is its remarkable ability to do well in a wide range of climatic conditions. No other commercial peach variety has succeeded in so many peach-producing areas.

Other good points of the variety include a very strong, hardy tree, and fruit that withstands the abuses of handling and shipping unusually well.

Many fine new peach varieties have been produced in recent years, but these have been selected mostly for the season before or after Elberta. The latter is recognized as the Queen of peach varieties and peach breeders realize that it will be a long time before a successful claimant to the throne will be found.



A fine Elberta orchard growing near South Haven, Mich., about 1895, when the variety was still new in the northern areas. Note the clean cultivation so disliked by today's soil conservationists.

## NEW HARDY FRUITS

(Continued from page 18)

No. 1007, is a splendid, aromatic, large apple. The tree is productive northward into Manitoba. The fruit suggests Northern Spy. This is one of the finest eating apples. Godfrey is a seedling of Patten selected at Morden. The fruit is somewhat suggestive of Jonathan and, although less an aristocrat, is of good quality and the tree is thrifty over most of the plains. Season is from October to February.

Several varieties of crabapples are proving of interest. Chestnut is a seedling of Malinda developed at Minnesota. It produces a two-inch reddish bronze fruit from September to mid-November. Geneva is a seedling of *Malus niedzwetzkyana* from Ottawa. Fruits are beyond the crabapple size, ripening in September, with carmine skin and reddish flesh. Morden 347 (Martha x Dolgo) is a hardy upright tree bearing fruits suggestive of an overgrown Dolgo. Morden 352 (Dolgo x Haralson) produces a very hardy, healthy, productive tree. Fruits of pleasing quality are dark red to crimson, crabby but sweet and sprightly. Season, September to March.

Rescue is a seedling of Blushed Calville from the Experimental Station, Scott, Saskatchewan. A large crabapple, yellow washed red color, it is a pleasing dessert fruit ripening in August. The tree is abundantly hardy and an annual bearer. Rosilda (Prince x McIntosh) from Ottawa is large, frequently over two inches. Skin is mostly bright crimson. Flesh is crisp, juicy, sub-acid, perfumed. While good for eating, it is excellent canned. Trial (Northern Queen x Rideau), a second-cross apple crab from Ottawa, may attain nearly two inches in diameter. Color is pale yellow washed and striped orange-red. Having a season from August to September, this popular fruit is excellent fresh or canned.

Pears often suffer from fire blight on the rich prairie loams. Leading varieties in the North are Bantam, Minnesota 4, Pioneer 3, and Tait-Dropmore. Farther southward, Parker and Mendel, large sized varieties, are preferred. The four smaller varieties are hardy and come into bearing early. Bantam appears widely adapted with good quality.

Many fine plums and plum-hybrids are available. Bounty and Northern are two productive seedlings of Assiniboine introduced at Morden. Ember is a large yellow and bright red plum (Shiro x South Dakota 33) from Minnesota, ripening in mid-September. It has very good quality. Fiebing (Kaga x Wickson, a mid-season variety of excellent qual-

ity, from Charles Haralson, Minnesota, is large, dark red, firm-fleshed, sweet, and aromatic.

Grenville (Burbank x Nigra) from Ottawa is a newcomer that is gaining prominence. Ivanovka, imported from Manchuria, *Prunus salicina*, produces a tree that is fully hardy, vigorous and productive.

Minnesota 101, a large orange-red plum, with concentric circles about the stem end, has a wide range. Ripening in early September, it is a favorite dessert fruit. Pipestone, formerly Minnesota 218, is a very large mid-season plum of excellent quality and marked hardiness. Redcoat, a sister of Red Wing from Minnesota, thrives far northward. It appears resistant to brown rot. Ripening season is late August. It is esteemed for jam. Russian Green Gage is an imported European of remarkable hardiness. Other popular plums include the well-known Emerald, Kaga, La Crescent, Loring Prize, Mount Royal, Pembina, Red Wing, Superior, Tecumseh, Underwood, Waneta, and Winona.

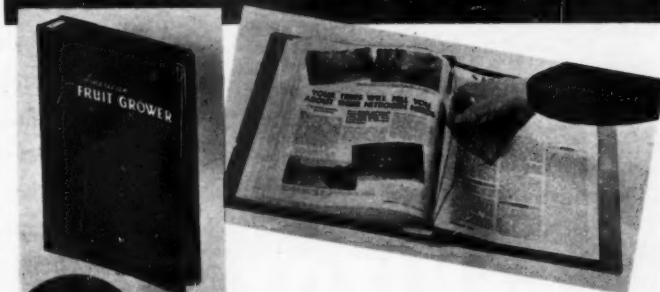
Leaders in cherry-plums at present include Convoys, Dura, Hever, Manor, Mordena, Red Cortland, Sapa, and Sapalta.

Sour cherries are represented by Coronation, Homer, Moscow, Wragg, and the less reliable Dyehouse, Early Richmond, and Montmorency. Nanking or Manchu cherries, *Prunus tomentosa*, are valued as reliable bearers across the plains.

Apricots of Manchurian strains are succeeding well where soil drainage is free and providing the district is not featured with prolonged mild spells during deep winter months. This stone fruit seems easily prompted to break its winter dormancy, which is fatal to its flower buds. Brookings, Fargo, Morden, and Beaverlodge in northern Alberta grow these fruits profitably. The following are rated, at Morden, as deserving of trial: Anda, Manchu, Morden 604, Ninguta, Robust, Scout, Sing, and Tola.

Fruit breeders have recently contributed the following berry and vine crops: Burgundy, Arrowhead, Evermore, Louise, Sparta, Glenheart, and Pixie strawberries; Madawaska, Ottawa, Durham raspberries, the latter a New Hampshire variety which bears a fall crop relatively early; Bristol and Dundee blackcaps; Red Wing, Stephens, and Cascade red currants; Fredonia, Portland, Van Buren, Mary, Eurlie, and three Minnesota varieties, Blue Jay, Moonbeam, and Red Amber grapes.

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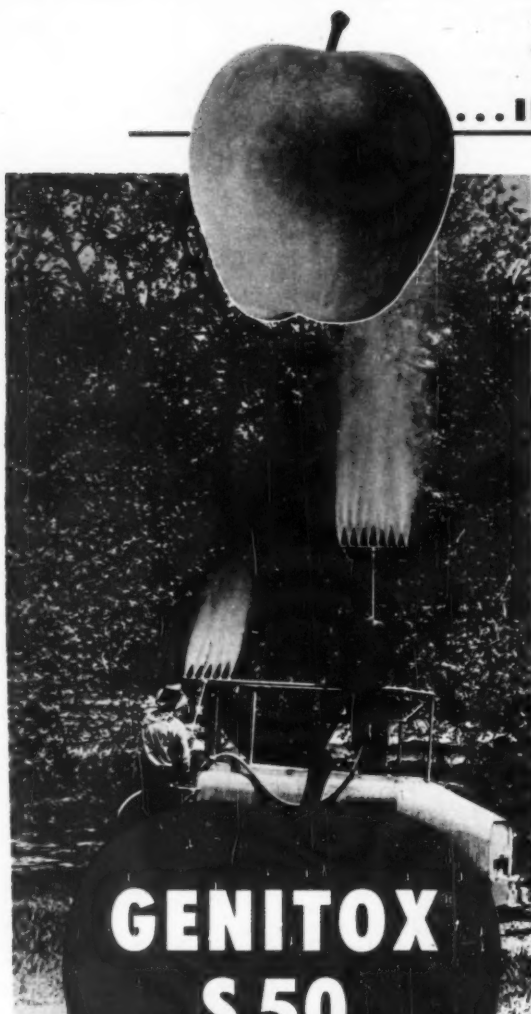
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Offices in Principal Consuming Areas



## CHESTNUTS, BLACK WALNUTS AND PECANS

(Continued from page 24)

In black walnuts, Thomas, oldest of the named varieties, is still the most often planted. In the far northern States it is a little too late maturing, and farther south some growers find it yields well but does not produce plump, well-flavored kernels as consistently as some others. In Oklahoma, Ogden, Cooper, and Stambaugh have appeared superior during recent years, but Ogden is considered probably too late for areas north of Oklahoma.

Stambaugh, from Illinois, was first prize winner in the Northern Nut Growers Association's 1926 contest, and is now a preferred variety in widely scattered plantings, from Tennessee northward. In southern New York it matures well only in the longest seasons. Its heavy husk is consid-

Carolina and westward. At the former location it and Snyder (New York origin) ripen two weeks ahead of Thomas, but retain their foliage until hard frost, which Thomas and many other varieties do not. Snyder is rather slow in growth but bears early and consistently.

At Leavenworth, Kans., the Vandersloot is apparently a more robust tree and is preferred over Thomas. Vandersloot, from Pennsylvania, and Benge and Speer (a Benge seedling) from east Texas have among the largest nuts in cultivated varieties, and very large kernels, but their shells are rather thick.

Elmer Meyers (Ohio origin) is the "papershell" among black walnuts. An eastern Iowa grower also rates it among the hardiest, and it is promising as far south as North Carolina. Other very thin-shelled varieties are the Huber, its seedling, Cochran, and the Kettler, all from Wisconsin. Taste is a small but hardy nut from near Ithaca, N.Y., where most larger varieties do not mature well. Cornell, a new one from the same area, is not so well tested. Many others are promising in limited tests, as Homeland (Va. and N.C.); Hare, Norris, and Harney (Tenn.); and Orr (Ala.).

Of potentially greater value than most varieties is the Lamb, in which the nuts are not the product of primary concern, though they appear to be of good size and better than average quality. It has been demonstrated by J. Ford Wilkinson, Indiana nut nurseryman, that grafted Lamb trees will produce wood with a highly developed curly grain. The original Lamb black walnut, cut near Grand Rapids in 1929, yielded several thousand dollars' worth of veneers. The Lamb trees are rapid and upright growers. They can be top-worked after growing a high trunk, to produce a fruiting top of another black or Persian walnut variety, while the trunk is developing into a fancy veneer log.

The so-called Northern pecan varieties are really most at home in the lower Midwest, south to the upper Cotton Belt areas. They have fewer varieties than walnuts, and the older varieties like Major, Greenriver, Busseron, and Posey seem to be holding up well. Niblack, from the Wabash Valley, seems well adapted as a commercial cracking variety in northern Oklahoma. Two new varieties from southeast Kansas are the Johnson, also grown southward, and Giles, an early bearing variety that has promise eastward. Recent Illinois introductions are the Fisher, productive near St. Louis, and Goforth and Gallatin from the lower Wabash Valley.

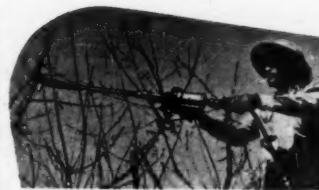


Serving the retailer direct from his orchard as well as from his 25,000-bushel Quonset-type common storage is the way Art Seel of Benzonia, Mich., does business. He has two trucks, each of which holds 350 bushels of apples, and he makes one weekly trip to town, thus delivering 700 bushels. He saves on replacement cost of containers by picking up empties on his next trip. Seel sorts his apples for uniform size which he thinks is "the big thing;" he also strives for uniformity in color. "What assures success is quality," says Seel.

ered a drawback by some, as is the case with the Ohio, among older varieties, and Brown, among newer ones.

Creitz, with a nut very much like Ohio, but thin-husked, is favorably reported from Virginia to Arkansas and somewhat northward. Mintle, from Iowa, has done well in some central Mississippi Valley States. The Mintle nut is smaller than most mentioned above, but it cracks better than Thomas and has a milder flavor than most varieties. In Illinois, the Mintle trees are said to bear young and heavily, grow fast and straight, and graft easily. (Some varieties, otherwise desirable, are hard to propagate.)

Sparrow, from Illinois, is one of the most promising of the newer varieties from southern New York to North



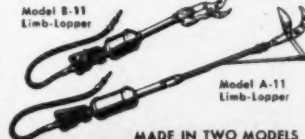
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—ideal for loading and unloading. Handles commodities up to 60 lbs. — moves bags, cases, cartons, hollow bottom, narrow, cleated and irregular packages or articles not suited to wheel conveyors. Less pitch required — operates at grades as little as 1/4" in. to 1/2" in. per ft. Interchangeable spacing of rollers—from 1 1/2 in. to 12 in. centers. Available in 10 ft. and 5 ft. straight sections and 90° and 45° curves. Keep LITEWATE conveyors handy in your shipping room — carry a section on your truck. For complete information write for Bulletin AFG 19.

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Handling Ease—  
ITS DRIVER CAN BE  
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Like the other 4 models of IH wheel-type orchard tractors, the O-4 has a slow low speed (1½ m.p.h.) to pace the power take-off sprayer to the job. And to operate the one-man speed-type sprayers, these orchard tractors have an effective working speed close to 5 m.p.h.

Note the O-4's low overall height, typical of all IH orchard tractors, to avoid tree injury. All models of these tractors have a low, roomy operator's platform—a convenient over-center, hand-operated clutch lever—and differential steering brakes for short turns in close quarters. Four of the IH orchard tractor models work on gasoline or distillate—the ODS-6 (3-plow) is Diesel powered.

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## IN THE NEWS

### W. H. MOSIER

After a long career in the Federal service, W. H. Mosier has retired from his position as market reporter in charge of the USDA's Fruit and Vegetable Market News office at Cincinnati. He served in that capacity since 1926.

Mosier joined the staff of the Bureau of Markets in 1917. He grew up on a fruit farm and his early experiences helped him to better understand marketing problems.



W. H. MOSIER

### HAROLD J. MILLER

Dr. Harold J. Miller, former assistant professor of plant pathology at Pennsylvania State College, has been recently appointed as senior plant pathologist at Whitmarsh Research Laboratories of Pennsylvania Salt Mfg. Co. Dr. Miller is a graduate of Ohio State University, a member of the American Assn. for the Advancement of Horticultural Science and the American Phytopathological Society.



H. J. MILLER

### DAVID G. WHITE

New professor of pomology in the Department of Horticulture at Pennsylvania State College is Dr. David G. White. He was formerly with the USDA's Sub-Tropical Fruit Field Station at Orlando, Fla. During the war Dr. White conducted research relative to rubber and rotenone and will continue his studies in the School of Agriculture as well as teach.



DAVID G. WHITE

### PAUL H. MULLER

The Nobel prize for 1948 in Physiology and Medicine has been awarded to Dr. Paul Herman Muller of the Geigy Company for his work on DDT insecticides. Dr. Muller is a native of Switzerland and joined the Geigy Co. in 1925. He has been working with synthetic insecticides since 1935 and in 1940 filed application for patent protection on DDT insecticides.



P. H. MULLER

### A. H. DILL

A. H. Dill of the A. B. Farquhar Co. has been recently appointed as Western District Manager. In this capacity he will serve as Direct Factory Representative covering the sales and service outlets located in the far western states and part of Canada. Mr. Dill has been with the company for four years as assistant sales manager of the Iron Age Farm Equipment Division.



A. H. DILL

**AMERICAN FRUIT GROWER**

will not come under the law. The suggestion that cherries and other fruits be included in the act and that it be called a fruit promotion law met with approval.

The "round table" by growers proved one of the interesting features of the convention. Gilbert Hipke, in telling of experiences in apple processing, showed a solid pack of appetizing looking canned apples in No. 10 tins put up by A. T. Hipke and Sons Co. at New Holstein. He said canning apples for pie bakers offers a good future outlet; however, only fruit of good size can be profitably canned because of the waste in the core and peel. The canned product is fully as good as the frozen for pie baking, said Mr. Hipke.

A. K. Bassett of Baraboo, who with his son, Arthur, operates Ski Hi Fruit Farm, said that their apples were sold at the orchard. Their top day, several years ago, was \$3000. Their slogan is, "Give the customers what they want."

Thinning the orchard by cutting out trees on the diagonal was highly recommended by Don Reynolds, Sturgeon Bay. Easier spraying and better quality fruit were among the advantages listed. A bulldozer is used in the Reynolds orchards to take out the roots and prevent future sucker growth.

M. B. Goff of Sturgeon Bay, reporting on the results of irrigation in his orchard, said it had been highly profitable. He gave the cost of the distributing system as \$65 per acre, not including cost of the well or pump. Labor cost runs about \$5 per acre per application. He recommended applying at least two inches per acre at one setting. The heavy watering will allow 10-day to two-week intervals between applications and still promote vigorous growth even though there is no rainfall meanwhile.

Two of Wisconsin's top scientists received the honorary recognition certificates of the society. Dr. Charles Fluke of the department of entomology, University of Wisconsin, was awarded a certificate for his notable service to Wisconsin fruit growers in research on the control of orchard insects. Dr. George W. Keitt, chairman of Wisconsin's department of plant pathology, was awarded a certificate for his work on the control of diseases of fruit and other horticultural crops.

One of the out-of-state speakers was Minard Farley of the Michigan Apple Commission, Lansing. He mentioned that in the State of Washington the sum of two and one-half cents per box is collected for advertising apples while in Michigan the assessment is one cent per bushel. He advised that if a law is passed in Wisconsin the tax be collected in the same way as sales or income taxes. —H. J. Rahmlow, Sec'y, Madison.

**MICHIGAN**—A record attendance and a fine spirit dominated the 78th annual meeting of the Michigan State Horticultural Society at Grand Rapids, December 7-9. The experiences of the season of 1948 were reflected in the topics discussed, such as red banded leaf roller and mite on apples, stem end rot of strawberries, general small fruit problems, sour cherry problems, irrigation, concentrate sprays, pruning, thinning, merchandising, and promotion. Brown rot of peaches, though not receiving a prominent place on the program, was recognized as important and referred to winter and spring meetings. Special long-time research and extension programs were announced by Michigan State College to meet the brown rot situation.

Out-of-state speakers were Dan Dalrymple, secretary of the New York State Horticultural Society; Truman Nold, secretary of the National Apple Institute; and Edgerton Hart, secretary of the Na-

tional Red Cherry Institute. There was much interest shown in the discussion of "four leaf clover" pruning and more open pruning of apple trees. A. E. Mitchell showed results of experiments in opening trees so as to adapt them better to new, rapid, concentrate sprayers.

Mr. Nold described the many small transactions necessary to dispose of a carload of apples—some 3000 customers in all. He pointed out that one-third of the purchasers of apples are new purchasers during the last nine years, indicating the importance of constantly reminding the consumer of the product for sale. Speaking of quality, he said that the housewife was doing too much of the grading of fruits in retail stores which might better be done in packing plants. High retail mark-ups were said to be due in many instances to "garbage can throwouts."

Mr. Hart described the cherry adver-

tising program. The movement of the 1948 crop of cherries has been so good that the Michigan Cherry Commission is husbanding some of the \$100,000 collected from the cherry advertising assessment for future use.

A panel discussion by Jerry Mandigo, Otis Klett, and James Thar was a feature. Mr. Klett emphasized the necessity of thoroughness and care where small fruits are grown. He said that if a man was figuring on an operation of a certain size he might usually better cut the size in half and put the money in doing a good job on what he had.

Officers of the society for 1949 are Herbert Nafziger, president; E. J. Robinette, vice-president; Randolph Monroe, treasurer; H. D. Hootman, secretary; and John Rickert, C. C. Taylor, Russell Evarts, L. A. Spencer, George Farley, and Dr. H. B. Tukey, directors.

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			<b>CHERRY</b> — Oxborn, Bing, etc.
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Reliable apricot

## SOFT TREE FRUITS FOR BRITISH COLUMBIA

(Continued from page 23)

In season of maturity, Reliable is slightly later than Wenatchee Moorpark and should not be picked until it attains full orange color, at which time it is quite firm and an excellent shipper. It remains firm on the tree over a long period, and the crop can be harvested in two pickings. Indications are that Reliable is self-sterile.

Van cherry is an open cross of Empress Eugenie. The tree is vigorous and of upright growth and has been a heavy annual bearer. The fruit sets thickly and is well distributed on the limbs, with heavy clusters on the younger wood. Van is a black cherry of Bing type, about as large as Bing, possibly slightly firmer and quite as good in quality. It is outstandingly attractive, with a



Van cherry.

very bright lustre which it retains well in storage. The variety is somewhat resistant to cracking of the fruit in rainy weather, being much superior to Bing in this respect. In season, Van matures slightly earlier than Bing. It has shown itself to be inter-fertile with Bing and Lambert.

Spotlight peach is a cross of Veteran with Rochester. The tree is of average vigor and bears well, requiring heavy thinning and good cultural care. The fruit is medium to large in size, highly colored, and very attractive, yellow-fleshed and of good quality. Spotlight is firm, being in this respect intermediate between Rochester and Redhaven. It has a smoother skin than peaches of Rochester type, but is semi-clingstone, resembling Rochester in this respect. Spotlight attains high color on the tree while still firm and should not be picked until good orange color has developed. As a canning variety it is very satisfactory. In season it is about a week earlier than Rochester.

AMERICAN FRUIT GROWER



## SOFT TREE FRUITS FOR PACIFIC COAST

(Continued from page 23)

peach situation will be discussed first. California has some 88,600 acres in bearing peach orchards, of which 48,235 are in canning clingstones and 40,365 in freestones. The non-bearing acreage is about in the same proportion and represents approximately 20 per cent of the bearing acreage—evidence of expanding acreage and production. More than a modest proportion of this total acreage has been planted to varieties unknown 20 years ago, and therefore varieties which, horticulturally, might be called new.

Opportunities in the freestone peach field have been largely in new varieties for the early and late markets; Elberta still reigns supreme as a midseason variety. The new varieties come from all sources; introductions from other states, private plant breeders, chance seedlings, bud sports, and institutional plant breeding programs. It will be impossible to mention all such varieties being tested, or grown, but some of the best are mentioned. Many of these may well fall by the wayside to "darkhorses" even now being grown. It is expected that most will not be permanent additions to our variety lists.

Starting the season at present are two very early selections produced by Grant Merrill, Red Bluff, Calif.; Merrill Gem (—50)\* and Merrill Beauty (—40). The former is a very high-colored, large, non-melting dessert type.

The latter is later, large, well-colored, and semi-free. These have had limited successful commercial trial. Redhaven (—45), of the Michigan Experiment Station, is in this season. It has been grown enough to have shown its capabilities but will probably not be a very permanent addition to our peach variety list because of its tendency to produce a rather high percentage of too small fruit. Until a better variety is found, however, it is outstanding for color, shipping firmness, and quality for such an early season.

Fisher (—40) has enjoyed limited planting, but has shown weakness in firmness, texture, and quality. Nectar (—45), a white-fleshed sort, is in somewhat the same class, and does not meet the California preference for yellow-fleshed peaches.

July Elberta (—23) (and identical or nearly identical strains grown under several names—Early Elberta, Jewell, Kim Elberta) is unquestionably the favorite early season peach

at present. Except for a tendency to be a little small unless well thinned (and it sets heavily) this peach is exceptionally popular and is among the leaders in new plantings. Halehaven (—19) of the Michigan Experiment Station will apparently not replace the July Elberta, and as it ripens in almost the same season will probably not be planted extensively. It appears to be a little too soft for California shipping conditions.

Amador (—7), a USDA release, is a good commercial sort maturing about a week before the Elberta, but has not become commercial, though some small plantings have been made. In Elberta season, the Fay Elberta (+2), is peculiar to California and is mentioned only because it appears to be the only peach to have successfully invaded the Elberta domain. It is a local seedling of unknown origin but long grown, and has the advantages of holding on the tree much better in the Central Valley and of being firmer. Royal Fay (+2), in the same season, is a very recent promising selection. The Alamar (+6) is mentioned because it appears to be certain of at least limited planting. A California seedling, the Alamar, matures between Elberta and Rio Oso Gem in a season of no outstanding variety. It is similar to the Rio Oso Gem in many respects but perhaps more highly colored.

The Rio Oso Gem (+10) has enjoyed the most extensive planting of any of the new varieties. It is now the fifth leading variety grown in the State, and seems destined to rise higher on the list. Its season and general commercial excellence have attracted many growers. With the Elberta, and J. H. Hale, it is also one of the favorite varieties for processing, thus assuring other outlets than the fresh market. The Kirkman Gem (+50) is the latest of the really good list. A bud sport of the Rio Oso Gem, it matures nearly six weeks later, but possesses most of the good characteristics of the parent variety.

This has been a quick survey, largely of varieties that have at least partially proved their merit. Among others, the introductions of the New Jersey Station have received considerable attention, especially as the Golden Jubilee was once a popular variety in the State but is not now being planted. Most of the newer introductions from New Jersey have not been tested commercially but while often of excep-

(Continued on page 48)



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## ARE WE MAINTAINING OUR ORCHARD PLANTINGS

(Continued from page 15)

put our orchard businesses in a worn-out state.

What is the solution? If my assumption is correct, that the average age of our trees is too high, it's time we began to do something about it. The correction is obvious—to plant trees, remembering, of course, that the first requisite for success in orcharding is the choice of a good site.

If we are correct in assuming that it is a wise thing to plan on the limitation of the life of an orchard, then several other factors must be re-examined. One of these is distance apart of planting and another is the choice of varieties. High production per acre is a vital factor in profitable orcharding. Granted that a good site has been chosen, planting distance and choice of varieties are two very important elements in attaining high production.

Certain it is, if we want to stay in business, we must maintain our orchard plantings at an efficient and productive level. We must remember that culls and low grade fruit at best represent only salvage income and, as trees grow older, the percentage of salvage fruit increases.

**AMERICAN FRUIT GROWER**

## CONCORD STILL LEADS IN EAST

(Continued from page 21)

more resistant to black rot.

Kendaia is another blue slipskin ripening a week after Van Buren. It resulted from crossing Portland with Hubbard and has the pronounced rich flavor of the latter. The vine is as vigorous, hardy, productive, and resistant to diseases as that of Concord. The fruit does not hang well after ripening and must be harvested shortly after reaching the dead ripe stage.

Buffalo, another blue slipskin grape, ripens about 10 days before Concord or in season with Delaware. It is a seedling of Herbert crossed with Watkins. The large, attractive, shouldered clusters have a rich vinous flavor. The vine is somewhat less winter hardy than that of Concord and more susceptible to downy mildew. It is a heavy producer and must be pruned more closely than Concord in order to prevent overbearing. It produces excellent jelly of beautiful color.

Dunkirk is a fine red grape introduced some years ago, which has never received the attention it merits. A seedling of Brighton by Jefferson, it ripens in season with Delaware. The berries and clusters are larger than those of Delaware. The flavor and quality are very good, though probably not quite up to the Delaware standard. The vine is winter hardy and has been one of the most reliable producers developed at the New York Station.

Another grape which, too, has failed to receive the attention it should have is Ripley. This white grape is a sister of Ontario, having Winchell and Diamond as parents. It ripens a few days before Concord. The vine is winter hardy, a fine wood grower, a regular bearer, and not particularly susceptible to either mildew or black rot. It has given phenomenal yields of fruit in Oklahoma and other areas of the Southwest. The berries have a meaty texture, are very sweet and clean flavored.

The most recently introduced grape of commercial promise is Steuben. Named in 1946, this variety is a seedling of Wayne crossed with Sheridan. The fruit is blue and ripens a few days after Concord. The large, compact clusters are cylindrical and usually shouldered or double. The skin is tough and covered with a heavy bloom. In quality, Steuben is one of the best blue grapes yet introduced for eastern grape growers. The vine is fully as hardy as that of Concord, has never been subject to attack by downy mildew or black rot, and is

very productive. It must be pruned more closely than Concord to prevent overbearing, due to its tendency to bear heavily on spurs and on shoots arising from dormant buds on old wood.

Yates and Hector are red grapes which ripen in season with Catawba. Yates is a seedling of Mills crossed with Ontario, while Hector has Chasselas Rose and Brocton for parents. Both are heavy producers and vigorous growers. Hector is about as susceptible to attack by downy mildew as Delaware. The flavor of Hector is sweet and much like that of its Chasselas Rose parent. Yates has a spicy flavor resembling that of Mills. Both have large, attractive clusters and tough skins and keep wonderfully well in storage.

Mention should be made here of a new, hardy seedless grape which was introduced so recently that it has not yet proved itself in the hands of growers. It is Interlaken Seedless. This is the earliest grape now available for eastern grape growers, ripening a few days before Van Buren or more than four weeks before Concord. The vine is vigorous and productive but somewhat less hardy than Concord or Van Buren, being of about the same degree of winter hardiness as Seneca, Golden Muscat, Dutchess, and Hector. It has never shown susceptibility to mildews or black rot. The clusters are medium sized, attractively shouldered. The berries are about the size of those of Delaware and ripen to a rich golden yellow color. The flesh is meaty and entirely seedless. The flavor is a rich blending of that of Thompson Seedless and Ontario and ranks with the best. Interlaken Seedless is the only hardy seedless grape yet introduced which promises to have real possibilities for eastern grape growers.

Other new types of interest include French-American hybrids developed in France. These were developed to combine the disease resistance of American wild grapes with the qualities of the European vinifera grapes. A number of these have been tested for their adaptability to America and several of the Seible and Seyve-Villard hybrids appear promising. Most of these are strictly wine types, however, and are of interest primarily in making wines.

Acknowledgment is made to New York Experiment Station, Geneva, for photographs of Dunkirk, Steuben, and Interlaken grape varieties, and to USDA for photograph of Cardinal variety, all on page 21.

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## RECENT PEACH INTRODUCTIONS

(Continued from page 20)

replacing the old Uneeda and Red Bird varieties, white-fleshed peaches of poorer quality. The Earlyeast and Cherryred are more recent introductions that ripen in the same season.

The Erly-Red-Fre variety, a large, attractive, white-fleshed peach, matures a little later than Dixired and overlaps it in ripening to some extent. It is gaining commercial rank, particularly in south-central Georgia.

Next in the ripening season is a group of outstanding new varieties that are eliminating the old Early Rose variety at a rapid rate. They are not completely freestone in some years, but are sufficiently free at the eating-ripe stage to satisfy consumers. Redhaven (a Michigan introduction) and Dixigem (a USDA introduction) are yellow-fleshed peaches, excellent for freezing and home canning as well as for shipping purposes. Both varieties have been widely planted and have been shipped long distances in carload lots, so their commercial capabilities are well known. Jerseyland is an attractive, yellow-fleshed recent introduction of the New Jersey Station, which ripens a day or two earlier and seems to have commercial possibilities, also. Prairie Dawn and Prairie Sunrise (from the Illinois Station) and Missouri (from the Mountain Grove, Mo., Station) are recent yellow-fleshed introductions ripening in this season. Delicious is a bud sport of July Elberta, resembling the parent, but ripening three weeks earlier. These last four varieties have not been widely planted as yet and their future status is less evident. Pearson Hiley is a patented bud sport of Early Hiley that ripens a week earlier than its parent. It is an attractive peach, with a great deal of red color in the skin and flesh.

Golden Jubilee, in its brief life, has gained a place among our standard peach varieties. Because it lacks the necessary firmness for a shipping peach, there is an urgent need for a firmer peach in its ripening season. At present, the above-mentioned earlier ripening varieties are being used to replace Golden Jubilee for shipping purposes in the first part of its season. Ripening in the latter part of the Jubilee season is the Triogem peach, a firm, attractive, yellow-fleshed peach, which is gaining in popularity although lacking large size. Newday, also a New Jersey introduction, is a little earlier to grow than Triogem, but lacks the firmness of Triogem for shipping purposes. Fairhaven is a recent

yellow-fleshed Michigan introduction that appears promising. Raritan Rose and Early Hiley are white-fleshed freestones that overlap the Golden Jubilee ripening period. As the demand for white peaches decreases after good yellow varieties are available, planting is limited.

In the ripening period two to two and one-half weeks ahead of Elberta, the competition among new peaches is also keen. Halehaven, one of the older "new" varieties, is the most widely planted of the group. It has an advantage for northern plantings of being a little hardier in bud than most varieties. In some of the southern States, July Elberta is more heavily planted. Both Halehaven and July Elberta could be replaced by a better shipping variety.

Other new varieties in this season of ripening, which have been tested for a number of years and perhaps have reached the peak of their popularity, are Golden Globe, Vedette, Fireglow, Valiant, Veteran, and Goldeneast. All are yellow-fleshed peaches having certain superiorities to older varieties and also shortcomings to make them vulnerable. Sun-high is a more recent New Jersey introduction, which produces firm and attractive peaches of good size. The recent USDA introduction, Southland, is a seedling of Halehaven x self. It combines a relatively low chilling requirement to break the rest period of its buds with some of the better fruit qualities of the Halehaven parent. HerbHale is another new yellow peach which looks promising and seems to merit wider testing. The recent Mountain Grove, Mo., introduction, Loring, has not been widely tested. In this ripening period there is need of varieties with better shipping and market qualities, more capable of meeting Elberta competition.

In the Belle of Georgia season, one week ahead of Elberta, the Sullivan Early Elberta peach has taken the lead in the South. It is a bud sport of Elberta, ripening a week earlier than its parent. In general appearance and characteristics it so closely resembles Elberta that it is shipped under the Elberta name. The adaptability of this peach to northern conditions requires further trial. The New Jersey peach, Redcrest, and the Illinois introduction, Prairie Clipper, are recent developments that show promise of commercial possibilities.

The Elberta peach remains the superior variety in its season in spite of its apparent shortcomings. It dominates commercial plantings in nearly every State where peaches

AMERICAN FRUIT GROWER



are grown commercially, and none of the new varieties show evidence of replacing it. The Maryland introduction, Redskin, and the new peach Halegold, ripening with Elberta, need further testing to determine their true value.

Only a few of the newer varieties ripen later than Elberta. With new insecticides to control Oriental fruit moth and curculio, there should be greater interest in these peaches. Rio Oso Gem is a patented yellow-freestone, ripening about a week later than Elberta. The fruit is firm and attractive. The tree, like J. H. Hale variety, is slow-growing. Autumn and Goodcheer are recent New Jersey introductions tested principally in the State of their origin.

A number of these new varieties are reported to be particularly suitable for freezing purposes because they are non-browning, or relatively slow to discolor when thawed after freezing. These include Redhaven, Dixigem, Prairie Dawn, Redcrest, and Redskin. Many of the newer varieties are superior to Elberta for canning purposes also. The same characteristics that plant breeders look for in selecting new varieties apparently carry with them better canning and freezing possibilities. We may look for improvements in processed peaches in the future.

In this discussion the attempt has been made to mention only those new varieties that are gaining in importance as commercial varieties and those that, though relatively untested, are attracting increasing attention and are showing possibilities of becoming commercially important. Some will no doubt be superseded by future introductions before they have been sufficiently planted to establish their true worth among the present known varieties. Only a few will attain important commercial rank, but all represent steps in advancement in the improvement of peach varieties.

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## (Continued from page 43)

The special climatic niche occupied by southern California has been well served by efforts of plant breeders in southern California, notable among which are the Chaffey Junior College, George P. Weldon; the University of California, Dr. J. W. Lesley; and the Armstrong Nursery Company. Varieties, both freestone and clingstone, originating in southern California and adapted to the mild climate of that region are Robin, Redwing, Curlew, Meadowlark, Flamingo, Golden Blush, Scala, Rosy, Golden State, Ramona, Hermosa, Sunglow, Bonita, Chaffey, Weldon, and Fontana. Just released are 11 new varieties from the Chaffey Junior College program. The more recent introductions have not

The nectarine is peculiarly a California commercial fruit, but until recently the varieties grown were of long standing. Efforts to improve this delicate fruit have been quite success-

ful recently and the picture is rapidly changing. The new varieties will largely be yellow-fleshed, freestone types, larger, and quite comparable to the best peaches in all around appeal. Already named and grown to a limited extent are the Bim, Kim, and Le-Grand of Fred Anderson, Merced, Calif. The Sequoia, a bud sport of the Hutchison peach, is also a very attractive, large, high-quality white-fleshed nectarine. Tioga, a late-maturing yellow freestone USDA release, is also

\*\* — = Days before Paloro; + = days after Paloro.

**AMERICAN FRUIT GROWER**

recommended for freezing. It is apparent that the list will soon be longer—and better. The Garden State of New Jersey has received a very limited trial but appears to be too tender for California purposes, although an excellent variety. Others from the East have not yet been evaluated.

The apricot, because of its predominantly dried outlet and extended ripening period in the various sections devoted to this fruit, does not enjoy the boom for new varieties characteristic of the peach and nectarine. The Royal and Blenheim are outstanding horticultural varieties, fully comparable to the supremacy of Bartlett in pear production, and hence it has been difficult to produce varieties of better all around characteristics. However, for the early shipping districts a few new seedlings are under trial, and the Perfection appears a promising named variety. It is not as well suited to canning and drying, however, so will not compete in the main apricot markets. Riland is a highly colored dessert type apricot not suitable for canning or drying. It has not proved too popular in California but seems to have a place for local markets as it is a high quality, attractive fruit. It is one apricot needing provision for pollination. The Earligold and Reeves are new varieties adapted to southern California climatic conditions.

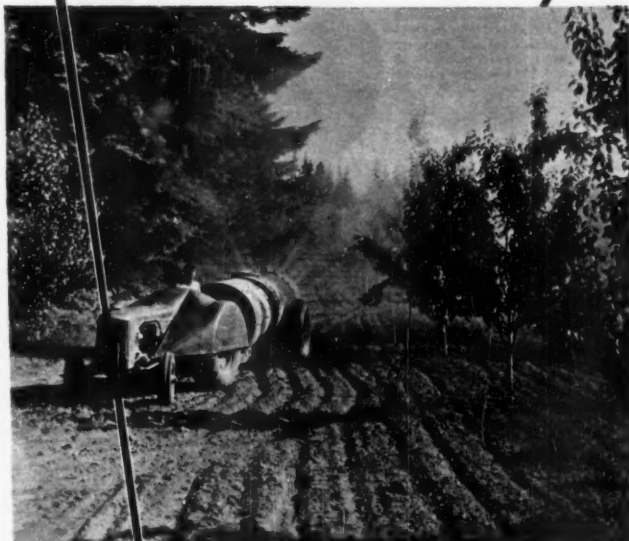
The shipping plums are still largely those of Burbank's time, with few changes. Notable, however, are the Late Duarte, a bud sport of the Duarte variety, and the Late Rosa, a bud sport of the Santa Rosa. Both of these have been extensively planted, being later than the original varieties, and extending the season for two of the most popular plums grown for shipping. Both follow their parent variety by two or three weeks. The late Duarte is fully similar to the Duarte; the Late Rosa is quite distinct from Santa Rosa but a highly colored, attractive fruit. The Howard Miracle is a new southern California plum of promise. Mariposa is a blood plum from southern California with considerable merit but as yet not extensively grown.

The status of cherries and pears remains static in California, with the older varieties still in favor, though there are new cherry varieties being tested, some of which will undoubtedly join the rank of named varieties before too long.

Acknowledgment is made to Armstrong Nurseries, Ontario, Calif., for photographs of Robin and Early Elberta peaches and Royal apricot; to Harrison's Brothers Nurseries, Berlin, Md., for photographs of Redhaven and Rio Oso Gem peaches; and to Grand Merrill, Red Bluff, Calif., for photograph of Merrill Gem peach, all on page 23.

JANUARY, 1949

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## TEXAS VARIETIES

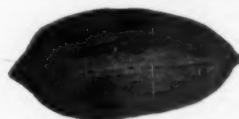
*(Continued from page 24)*

midity, favorable to pecan scab and other diseases, largely preclude other varieties in this area.

For the western part of the pecan-producing area of Texas the so-called Western varieties are popular. Briefly, then, the varieties which have been standard for Texas are principally the Success, Stuart, Mahan, and Schley of the Eastern varieties; and the Western Schley and Burkett of the Western varieties.

Of the many new varieties being introduced and tested, two are worthy of special attention.

The Desirable is commanding more interest in Texas today than any other "new" variety. It originated in Georgia many years ago, but is relatively new to Texas. The first test trees apparently were started in Texas about 1935. The performance of the variety in all sections has been most



**Texhan**

satisfactory. The trees have good growth and bearing habits. The pecans are large; 40 nuts weigh a pound. Good average pecans of this variety contain from 54 to 56 per cent kernel. Purchasers like the Desirable because of the large size, attractive appearance, ease of shelling, and good kernel quality. Growers like it because it produces good crops and the pecans are easy to harvest and easy to sell. The Desirable is considered to be a proven variety for Texas and is being planted widely.

The Texhan is another new variety of promise, introduced by N. H. Hander, Belton, Texas. It is a chance seedling and is regarded as a cross of the Mahan and Moore. The trees of this variety appear relatively free from disease. They bear early and heavily. The nuts are large, of fine quality, and move freely in the markets. It is definitely promising as a new pecan variety for Texas.

The varieties of pecans, old and new, which are today being recommended most commonly for a commercial planting in Texas are the Success, Desirable, Moore, Western Schley, and Clark.



## SOUTHEASTERN PECANS

(Continued from page 24)

in the Southeast. The tree is an upright grower, generally free of scab, moderately productive. Nuts are medium to large.

Moore is a prolific variety that has been planted extensively in parts of Florida and Georgia. The tree is susceptible to scab in some sections. The nut is small to medium in size. Money-maker is another variety that has been planted extensively over the Southeast. The tree is prolific but is susceptible to scab in certain areas. The nut is medium size.

The Schley is grown extensively in Georgia and other southeastern States. It is moderately prolific but requires spraying to control pecan scab. The nut is medium to large. Success is another of the old varieties which is grown in many parts of the Southeast. The tree is very prolific, generally susceptible to scab in many areas, and produces a large nut.

As indicated, only a few varieties have been commercialized in the Southeast during the last 25 years. One of the main reasons for this is that many years are required for adequate testing of pecan varieties so that they can be safely introduced to the trade.

A few new varieties are being tried by the USDA Pecan Field Stations but these are mostly in the testing stage. The Desirable has had limited distribution and a few small plantings are located in west Florida. The tree is reported to be prolific and free of disease, producing a nut of medium to large size.

## STONER WHITE PEACH



"Queen of White Peaches" is the way R. L. Stoner of Dayton, Ohio, describes the peach which he has recently patented. The fruit was discovered as a bud sport on an Early Elberta back in 1929. In 1931 Stoner planted 63 of his propagated trees; they started to bear in 1934 and have borne 14 crops in 15 years. The trees show vigorous growth, bear consistently, and are hardy in wood and bud.

The fruit itself has a finely pubescent skin of flaming red, is freestone, and the flesh is creamy white and firm. Stoner recommends the peach for freezing and canning because of the firm flesh and good texture.

JANUARY, 1949



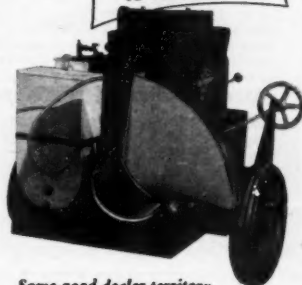
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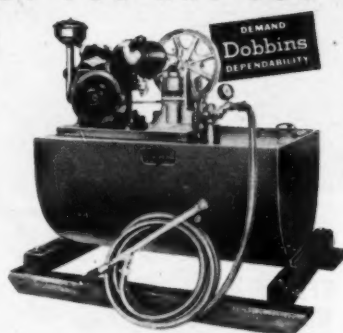
Buds taken from fruiting orchards. We offer the following varieties: Elberta—Golden Jubilee—Red Haven—Red Elberta—Hale Haven—Fertile Hale—J. H. Hale—Valiant—Vesuvius—Lemon Free—Guthrie—Cambridge—Champion—Late Red—Orion—Rochester—Selle of Georgia.

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From where I sit... *by Joe Marsh*

## Nicest Compliment I've Had

One of the nicest comments I've received about this column was from an editor in the Middle West I called on. And while I don't like to give myself orchids, I think it illustrates a point.

"Joe," he said, "it so happens I don't agree with everything you say, but I always like to run your column. Because it gets down to earth and talks about the right to disagree. And it only asks for tolerance towards the other person's point of view."

He went on to explain, by way

of illustration, that he never had happened to have a taste for ale or beer. But that when I spoke of the right to enjoy a moderate beverage like beer, well, he was right there with me!

And from where I sit, that's the important thing: not whether you share another person's tastes or point of view—but whether you recognize his right to exercise a free choice in a free land.

*Joe Marsh*

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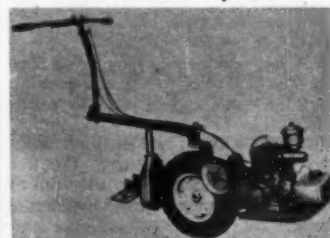
# NEW

## Farm Wagon



Built low for convenience with heavy-duty wheels, the Stahmer adjustable steel farm wagon is manufactured in three models—for heavy-duty, super-duty, and wide-duty. It can be extended in length, all parts are welded, and it can be accurately steered.

## Bolens Yard Boy



Light enough for a child to handle and easy to operate, the Bolens Huski Yard-boy is a new one-wheel tractor for lawn and garden work. The tractor is compact, various implements can be attached to it, steering is controlled by gentle pressure on the pivoted handlebar, and the speed can be regulated.

## Aluminum Poles



For that elusive operation high in a 30- to 60-foot tree, the J. B. Sebrell Co. is manufacturing lightweight aluminum poles for harvesting, shaking, pruning, trimming, and sawing. Such operations can be done safely with an increase in production and a cut in labor cost and effort, according to the manufacturer.

**AMERICAN FRUIT GROWER**

## SMALL FRUITS

(Continued from page 22)

ries. The lateness of the fall crop of Indian Summer and a tendency of the berries to crumble under certain conditions has stimulated the raspberry breeders to develop something better. September, introduced in the fall of 1947 by the New York Experiment Station, has shown considerable promise as a variety to replace Indian Summer. The fall crop begins ripening about September 1 at Geneva, or from two to four weeks earlier than the fall crop of Indian Summer, and is of excellent quality. The summer crop is very early but only fair in quality and the berries stick rather tightly to the bushes. Limited tests indicate considerable promise as far south as Virginia and in California. In New York it is being produced successfully by one grower for the fall crop, which is sold on the Buffalo market.

Durham, from the New Hampshire Station, has not been under test long enough at Geneva for a fair comparison with September, but it is not as good in quality, and may be a little earlier. These two are the forerunners of more two-crop berries to come. Hundreds of fall-bearing seedlings are being produced at Geneva in an attempt to develop varieties still earlier and better than September.

The Oregon Station has recently introduced three new blackberries, Cascade, Pacific and Chehalem, for trial in western Oregon and Washington. Cascade and Pacific are from crosses between the native Pacific Coast trailing blackberry and Logan. These are of high quality and very productive. Chehalem, a black trailing variety of high quality, is excellent for freezing.

The Texas Station has recently introduced Earli-Ness, Big-Ness, and Regal-Ness, berries descended from a cross between a red raspberry and a dewberry. The growth habit is more like a blackberry than a dewberry. These high quality berries are commended for trial in east Texas for home use and market.

Two recent new blueberries have been introduced, but the last three varieties from the U.S. Department of Agriculture — Pemberton, Atlantic, and Burlington—are among the best and deserve trial by all blueberry growers. At Geneva, Burlington is less vigorous than the others. Pemberton is one of the most vigorous and a heavy yielder of large berries. Dixi is largest of all, and of good quality but killed to the ground when subjected to -31° F., although Jersey and Rubel produced fair crops.

The Dominion Experimental Farm at Ottawa, Canada, has recently de-

(Continued on page 56)



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## BRITISH COLUMBIA

(Continued from page 17)

thick and tough and the variety has good handling characteristics. Jubilee matures at least three weeks later than McIntosh and at least a week later than Jonathan. In cold storage, indications are that Jubilee can be held in good marketable condition until late February, nearly a month later than McIntosh. In common storage, also, it ripens about a month after McIntosh. It appears to be less susceptible than McIntosh and Jonathan to storage disorders. Pollination tests indicate that Jubilee is inter-fertile with Delicious, McIntosh, Newtown, and Spartan.

The Spartan apple is a cross of McIntosh and Newtown. The tree is of McIntosh type, with strong limbs and crotches and desirable habit. It has been a heavy and fairly consistent annual bearer, and the fruit requires moderate thinning. It picks easily, but is much more resistant than McIntosh to pre-harvest drop. The fruit is above medium size, somewhat of McIntosh shape, but more symmetrical and uniform in outline, highly colored with a solid, dark red blush. The quality is very good, fully equal to McIntosh. The stem is short and has the same tendency as McIntosh to stem-puncturing, but the skin is thicker and tougher than McIntosh.

Spartan matures two to three weeks later than McIntosh. In cold storage, indications are that Spartan can be held in good marketable condition until early February, ripening somewhat later than McIntosh. In common storage, Spartan also ripens slightly later than McIntosh, and in both cold and common storage it is much less susceptible than McIntosh to core flush and other disorders. In pollination tests Spartan appears to be inter-fertile with Delicious, Golden Delicious, Jubilee, McIntosh, Newtown, and Stayman.

The trees of these two varieties appear to be hardy at Summerland.

## SMALL FRUITS

(Continued from page 55)

veloped some black currants that are highly resistant to the white pine blister rust, the disease responsible for the prohibition of black currant culture in the United States. While these may eventually be of value to Canadian growers, it is not yet apparent that the present restrictions on the culture of black currants in the United States will be relaxed. The possible susceptibility to this disease of seedling escapes must be considered.

Acknowledgment is made to USDA for photograph of Sawtooth strawberry and to Oregon Experiment Station, Corvallis, for photographs of Cascade, Chehalis, and Pacific blackberries, all on page 22.

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Red x Black cross originated by our USDA which thrives on all soils. Very productive, large, easy to pick, deep purple fruit of finest dessert or canning quality. Vigorous upright canes, thornless, disease resistant and very winter hardy.  
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## CALENDAR OF COMING MEETINGS AND EXHIBITS

Jan. 7-8—Western Colorado Horticultural Society 6th annual convention, Mesa College, Grand Junction.—A. F. Hoffman, Sec'y, Palisade.

Jan. 7-8—Kentucky State Horticultural Society annual meeting, Paducah.—W. W. Magill, Sec'y, Lexington.

Jan. 10-11—Central Illinois Horticultural Society annual meeting, Lincoln Douglas Hotel, Quincy.—Ray Leeper, Sec'y, Ursa.

Jan. 10-11—Utah State Horticultural Society annual meeting, Hotel Utah, Salt Lake City.—A. Stark, Sec'y, Salt Lake City.

Jan. 11-13—New Hampshire State Horticultural Society annual meeting, in cooperation with Vegetable Growers' Association, Hotel Carpenter, Manchester.—Daniel R. Batchelder, Sec'y, Wilton.

Jan. 12-13—Missouri State Horticultural Society annual meeting, Columbia.—W. R. Martin, Jr., Sec'y, Columbia.

Jan. 12-14—New York State Horticultural Society 94th annual meeting, Edgerton Park, Rochester.—Daniel M. Dalrymple, Sec'y, Lockport.

Jan. 19-23—Maine State Pomological Society annual meeting and trade show, Lewiston.—Rockwood N. Berry, Sec'y, Livermore Falls.

Jan. 19-21—Indiana Horticultural Society annual meeting, Manufacturers' Building, State Fair Grounds, Indianapolis.—Ben Sproat, Sec'y, Lafayette.

Jan. 20-22—Tennessee State Horticultural Society 43rd annual meeting, Andrew Jackson Hotel, Nashville.—E. L. Brinkley, Sec'y, Signal Mountain.

Jan. 26-28—New York State Horticultural Society eastern meeting, Kingston.—Daniel M. Dalrymple, Sec'y, Lockport.

Jan. 26-27—Horticultural Society of Northern Illinois annual meeting, Le Claire Hotel, Moline.—Lloyd L. Group, Sec'y, Franklin Grove.

Feb. 3—Nebraska State Horticultural Society annual meeting, College of Agriculture, Lincoln.—Wayne C. Whitney, Sec'y, Lincoln.

Feb. 3-4—Idaho Horticultural Society annual meeting, Hotel Boise, Boise.—Anton S. Horn, Sec'y, Boise.

Feb. 9-11—Ohio State Horticultural Society annual meeting, Commodore Perry Hotel, Toledo.—C. W. Ellenwood, Sec'y, Wooster.

Feb. 10—Vermont State Horticultural Society annual winter meeting, Barre.—C. H. Blasberg, Sec'y, Burlington.

Feb. 10-12—West Virginia State Horticultural Society 56th annual convention, Martinsburg.—Carroll R. Miller, Sec'y, Martinsburg.

Feb. 15-18—Fruit Growers' Short Course, University of Vermont Department of Horticulture, Burlington.—C. Lyman Calahan, Ext. Hort., Burlington.

Feb. 17-19—Pennsylvania State Horticultural Association annual meeting, State Education Bldg., Harrisburg.—J. U. Ruef, Sec'y, State College.

Feb. 22-23—National Peach Conference, Sheraton-Coronado Hotel, St. Louis, Mo.—Carroll R. Miller, Sec'y, Martinsburg, W. Va.

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## H. H. HARRIS

Oldest member of the Wisconsin State Horticultural Society, H. H. Harris, of Warrens, Wis., passed away at the age of 97 years. Mr. Harris had tested over 200 varieties of strawberries in the last 30 or 40 years and his reports on strawberry varieties were of more-than-usual interest.

## HUBERT M. ROSENCRANS

Hubert M. Rosencrans, 59, assistant director of sales of the Grasselli Chemicals Department of the Du Pont Company, died suddenly in Philadelphia. Mr. Rosencrans was in charge of sales of agricultural chemicals and took part in the development of many new insecticides, fungicides, and weed-killers.

## ERNEST D. SMITH

Veteran fruit grower and founder of Canada's first commercial jam and jelly firm, Ernest Disraeli Smith, 95, died recently in Winona, Ontario. Mr. Smith served 32 years in the Canadian Senate and 13 years in Parliament. His horticultural activities included also the propagation and distribution of new fruit varieties.

## FRANK B. ROBINSON

A former West Virginia State senator and retired fruit grower, Frank Barnes Robinson, 62, died recently in Charles Town, W. Va. Mr. Robinson was president of the C. L. Robinson Ice and Cold Storage Company at Winchester, Va. During his senatorship, he was instrumental in obtaining legislation for control of cedar rust in the interest of commercial apple production.

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**AMERICAN FRUIT GROWER**

## CITRUS VARIETY SITUATION

(Continued from page 19)

has received some recognition in Florida as a type which might extend the shipping season for late oranges in that State.

The Washington Navel orange is not a desirable variety for Florida, Texas, and some portions of California. However, there are numerous bud sports and nucellar seedlings of this large fruited variety which have received some grower recognition. Several of these variants from the Washington Navel variety have been patented. The Robinson Navel originated in California and the Dream Navel and the Summerfield Navel originated in Florida.

The renewal of interest in Navel oranges is caused by the consumer demand for large, showy fruits. This demand is limited, and we still consider the Navel orange to be a novelty type in Texas because of the erratic bearing habits of the trees and the poor shipping quality of the fruit during occasional seasons.

Lemons are not extensively produced except in California. Word comes to us from that State to the effect that the Frost Nucellar Eureka, a variant from the excellent Eureka variety, is an important new lemon variety. The trees of this nucellar strain are much more vigorous and productive than the parental strain. The Citrus Experiment Station has numerous nucellar variants from other standard varieties which they are watching with great interest, but it takes time to prove whether or not these new types are superior to established varieties.

In novelty types of citrus, the Navel orange has been mentioned as a variety that is in good demand during the Christmas season because of its large, showy fruits. The acreage planted to Navels is being expanded in Arizona and Florida and to a very limited extent in Texas.

The Temple orange is an old variety of the tangelo type which finally won a place for itself because of delayed consumer recognition of gustatory delight to be found in the highly colored, sprightly flavored fruits which look like oversized tangerines or Satsumas. Fortunately, the trees of this "exciting" variety on sour orange and Cleopatra mandarin understocks are regular producers of heavy crops of fruit of high quality.

The Mineola tangelo is one of many creations of two of the grand old men of the citrus industry, Dr. Webber and Dr. Swingle, and has been struggling for recognition for more than a quarter of a century. It is probably the most promising of the tangerine-pomelo (grapefruit) hybrids because of its fine quality and flavor, large size, high color, early maturity, and yielding ability. Exploratory plantings are being made in Florida, the State of its nativity, and to a limited extent in California and Texas.

A discussion of citrus varieties would not be complete without a consideration of the small, highly acid types. Since they are not extensively planted, they must be considered novelty varieties.

Seedless Lime, a contribution from the USDA Office of Plant Introduction, is worthy of special mention because it appears to be a lime-lemon hybrid. The trees and blossoms closely resemble those of the Meyer lemon, while the lemon-shaped fruits have flesh that resembles the Mexican (Key) lime in appearance and flavor. However, the rind oil has a distinct lemon odor.

The Spineless Lime is a seedless variant of the Mexican variety and produces fruit having all of the desirable attributes of that variety without the thorn menace. The trees show a characteristic upright habit of growth and are more attractive in appearance than trees of the Mexican type. The fruit ripens during late summer and fall, and harvesting is much less painful than with the conventional thorny types.

Exploratory planting of the new and noteworthy varieties of citrus fruit is a necessary part of the testing program, but extensive planting of many of these new and unproven strains and varieties must be considered as a purely speculative venture. The establishment of a citrus orchard is a long time, fairly costly project and the owner would like to know that there will be a ready market for the product of his labors.

The motto of research workers, "Hail not the new while proof is meager. Be willing to believe but not too eager," seems to be a very good one for anyone who contemplates the use of new varieties, new methods, or new ideas.

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## OF A HORTICULTURIST

### Hardy Understocks

**W**HILE journeying through the tall corn country I stopped to visit W. R. Kime, fruit grower of Richland, Iowa, and past president of the Iowa Fruit Growers Association. He is an oldtimer in this State's fruit growing circles.

The old Kime orchard was highly productive in its prime, yielding from 300 to 350 bushels of apples per acre year after year. But the trees grew too large and old for most efficient operation, so Mr. Kime pulled them out and set a new orchard in the spring of 1936. The ensuing summer grasshoppers devoured about 15 acres of the newly set trees. The orchard was reset in the spring of 1937 and made excellent growth the following three years. Then the devastating Armistice Day freeze that caught trees everywhere on the Great Plains still in growing condition destroyed the young Kime orchard. And so again, in 1941, Mr. Kime reset the 15 acres.

This time, however, he guarded against possible freezing of his trees by setting most of his orchard to such hardy understocks as Hibernial and Virginia Crab. After the first growing season, he began topworking these trees to Starking, Golden Delicious, and Jonathan, in approximately equal proportions. He likes Jonathan worked on Virginia Crab and Starking on Hibernial. Set 28 by 32 feet, this young orchard will soon yield larger crops than did the old orchard.

In a limited way Mr. Kime also grows peaches, plums, cherries, and berries, mostly for local trade and family use. Elberta is his best yellow peach, and Champion meets favor as a white variety. The Superior plum, a large purple variety introduced by the Minnesota Experiment Station, grows well and produces large crops. Another plum which he praises for its quality is the Eureka, a large yellowish variety that measures one and one-half inches in diameter.

Two 10-year-old Schmidt sweet cherry trees are Mr. Kime's pride, for

sweet cherries are a difficult fruit to grow on the Great Plains. His trees have borne three consecutive crops of fruit and show no signs of winter injury and but little spring frost damage. The Schmidt has proved to be the best variety of sweet cherry Mr. Kime has yet tried cultivating. Last year his trees produced six gallons of big red cherries per tree.

Mr. Kime practices a sod-mulch system of culture in his bearing orchard. He likes a strawy manure for mulch and supplements this with an-

made. He used DDT for the first time in two of the cover sprays for codling moth.

Mr. Kime's inexpensive storage has proved satisfactory for his small commercial orchard operation. It consists of an insulated basement with dirt floor beneath the grading and packing room. The ceiling is made of sheet rock with eight inches of insulation, and the walls have 12-inch insulation. Apples are graded and put into crates in the packing room, then are lowered by gravity into the storage. An elec-



W. R. Kime shows how he topworked Hibernial to Starking. The graft union is directly above his head. Fruit is on a branch of Hibernial.

nual spring applications of ammonium nitrate.

Spraying is thorough, timely, and effective as evidenced by the clean fruit produced. This past year two pre-bloom scab sprays, a calyx-cup and eight cover applications were

trick elevator lifts the crates out for marketing. The capacity of the room is 2000 bushel crates. Apples can be held in good condition until May. Mr. Kime has an excellent local demand for his fruit.—E.S.B.

AMERICAN FRUIT GROWER



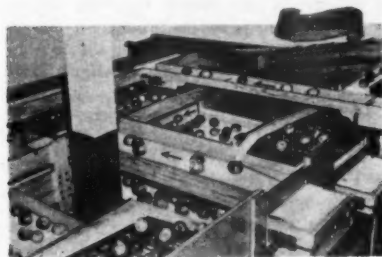
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(Kind of Fruit)

## EDITORIAL PAGE



E. G. K. MEISTER  
Publisher

H. B. TUKEY  
Associate Editor

### The Land of the Crooked Tree

U. P. HEDRICK, whom fruit growers know and admire, has written a book which is unsurpassed for beauty of expression. Dr. Hedrick already is a distinguished author, having written many standard works of pomology, but this is his first attempt at biography and writing in an inspirational and entertaining style. *The Land of the Crooked Tree*, a series of essays about the author's early life, until he entered Michigan State Agricultural College, tells about the life of settlers during the 1870's and '80's in the Little Traverse Bay region of Michigan.

Those were the days of hard labor, of logging bees and threshing parties, and of the privilege of an awareness of life which comes from living close to the soil. In expressive language enlivened with many incidents, Dr. Hedrick tells of his childhood experiences and these reminiscences will stir the memory of many of our readers. Young growers will enjoy comparing their lot with that of the early settlers to whom many of the necessities of today were luxuries.

Dr. Hedrick speaks of his father as a man whose self-appointed life work was conquering the wilderness and building new frontiers. "Before middle-age his tireless feet had thrice traveled to new frontiers." Men such as these, whose main aim in life was the accomplishment of new objectives despite the cost of hard, sometimes bitter work, laid the foundations for this great country. Dr. Hedrick's book offers many opportunities for reflection and is a worthwhile addition to every fruit grower's library.

### Your Customer—The Housewife

WOMEN, BUY the fruit for the household. They are the biggest and most important customers of fruit

growers. They are shrewder and far more discerning in their buying than men. To them spending money is an art and a pastime. Women like to spend money for fruit. It satisfies their aesthetic taste. They would buy far more fruit if growers would understand and heed the temperament of their women customers.

The grower sees the fruit as it hangs on the tree. The housewife too often sees a different product when she walks into the grocery store, purse in hand, and purchasing instinct aroused. The fruit which hangs so beautifully on the tree has lost much of its luster and much of its appeal. The very quality of the fruit which attracts the eye of the woman buyer has been sacrificed by improper handling, improper packaging, and improper display. It is to the best interest of every grower to check the flow of his fruit from the orchard to the housewife and to take the necessary steps to preserve its quality and eye appeal so that more fruit will be bought.

Although Mrs. Housewife has been known to have lapses in her ability to pick out high quality at low prices—in the millinery store, for instance—nevertheless, when she enters the food store, she never fails to become a keenly cold, highly analytical buyer. Realization of this fact together with steps to meet the housewife's challenge will result in increasing fruit sales and an expanding fruit industry.

### The Cornerstone of the Fruit Industry

WHAT THE MODEL is to the automobile industry, so the variety is to the fruit industry. It is the cornerstone upon which modern fruit production rests. And never was this statement more significant than today.

Take the sour cherry, or "the red cherry," as the Red Cherry Institute prefers to call this fruit. It rests upon a single variety, Montmorency. There are hundreds of other varieties of sour cherries, but none are the equal of the Montmorency. The result is that when fruit growers meet to talk about how to grow sour cherries, they are really not talking about sour cherries. They are talking about the Montmorency variety of sour cherry. If another variety were grown, the discussion of cultural practices might be markedly different.

Likewise, in the Pacific Northwest it is the Delicious apple that dominates the thinking. In the pear industry it is the Bartlett pear. In eastern grape production it is the Concord grape, and in peach production it is the Elberta. Cultural, handling, and marketing practices are built around these important varieties.

But varieties change. The Catawba grape was at one time the leader. The Crawford peach had its day. Baldwin and Rhode Island Greening apples dominated apple production. Then came new sorts to enter the lists to joust for the championship. Some went down before the superiority of old champions, while others in time unhorsed the champions and came to dominate the arena for awhile.

Always there is a change. Competition is keen among varieties disputing for the crown. One season is favorable to a new variety and it sweeps ahead. The next season is less favorable and it drops back. Little by little it shows its true characters and becomes the cornerstone upon which children go to college, upon which the farm is paid for, upon which happiness and success depend. The right choice is so important.

For these reasons, AMERICAN FRUIT GROWER brings to its readers this issue devoted to varieties. It will warrant careful study. On these pages appear the names of the varieties upon which the fruit industry rests. Among the numbers may be the names of challengers which some day will take their places, perhaps at the top of the lists.

### Fruit Production at a Glance

	1937-46	1947	1948
Apples bushels	115,958,000	113,041,000	90,286,000
Peaches bushels	86,725,000	82,603,000	67,467,000
Pears bushels	30,222,000	35,312,000	26,190,000
Grapes tons	2,701,000	3,072,000	2,935,100
Plums and Prunes tons (fresh)	723,140	675,000	604,600
Cherries tons	170,000	173,000	201,280

#### CITRUS

	1937-46	1947	Dec. 1, Est. 1948-49
Oranges boxes	89,727,000	110,380,000	114,900,000
Grapefruit boxes	47,478,000	61,630,000	56,250,000



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